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FARM ADJUSTMENT OPPORTUNITIES IN GREENE COUNTY, GEORGIA

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H. P. STUCKEY, Director
EXPERIMENT, GEORGIA

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FOREWORD

This bulletin discusses farm adjustment opportunities in Greene County, Georgia. Farming in this county, like much of the Piedmont in Georgia has been centered around cotton production for several generations. During the past few decades, the boll weevil, five and six cents cotton, and then acreage reduction from a small base has reduced the cotton acreage to less than one-fifth of that grown in 1919. These changes were accompanied by an exodus of about one-third of the population, but a high proportion of the farming systems has been continued with cotton as a main enterprise. On an acre basis, cotton is the most profitable crop in the area, but farming systems based mainly upon cotton make for poor utilization of the available land and the human resources.

During the 1930's various federal and state agencies aided Greene County farmers in their efforts to conserve their land and to rehabilitate their income-producing capacity. This effort has been continued and it is now centered upon those adjustments which make the maximum contributions to food and fiber production for the war. These wartime adjustments are mainly in the same direction as the desirable long-run changes in the farming systems outlined in this bulletin. It is difficult to anticipate how far Greene County farmers will be able to go in making these changes because of war period shortages of farm supplies and machinery.

Using price and cost relationships at 1936-1939 levels the bulletin outlines adjustment opportunities for representative farms, for each major size-type group within the present land base available on such farms. In addition, it outlines family-sized units and the number of families which the county could support on such units if the restabilization and development of agriculture in the post-war time is to be on a family-sized farm basis.

The effects of these adjustment opportunities upon farm income, if they were carried out, are outlined both for individual farms and for the county as a whole.

H. P. STUCKEY, DIRECTOR.

FARM ADJUSTMENT OPPORTUNITIES IN GREENE COUNTY, GEORGIA

By

M. C. Conner, W. E. Hendrix, C. R. Sayre, and W. T. Fullilove[1]

The Problem

The farm economy of Greene County, Georgia, like that of the Southeast Piedmont Area of which the county is a part (Figure 1), has always been dominated by the production of a single cash crop—cotton. Prior to the War Between the States, this crop had been grown chiefly on large plantation units operated with slave labor. After the freeing of the slaves, the plantation units shifted to the use of cropper laborers, who received a part of the crop as pay, and the sharecropper system evolved.

Sharecropping was widespread when the boll weevil made its appearance in the early 1920's. The impact of the boll weevil was tremendous. In 1918 Greene County farmers had produced 22,340 bales of cotton; in 1922 they produced only 326 bales. A commercialized farming area had practically lost its only source of cash income. This catastrophe, coupled with a decline in cotton prices, was the immediate cause of financial disaster for many farmers, especially plantation operators. Many farm people, particularly tenants, sharecroppers, and wage laborers left the county for industrial centers in a migration so extensive that the number of farms decreased 38 per cent from 1920 to 1925, and the population dropped to the lowest level since before 1880.

As there were no other intensive farm enterprises to which the farmers could turn immediately, they continued to grow cotton as methods of boll weevil control were developed. Yet their desperate need in the early 1920's moved some operators toward certain modifications in their farm organization. Many operators sold the timber which had accumulated on their land. Some increased the production of feed and food crops and added livestock.

An extension of such modifications in the one-crop system and the introduction of further adjustments essential to a successful agricultural economy in the area in recent years have been encouraged by agricultural agencies such as the Agricultural Extension Service, the Agricultural Adjustment Administration,

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the Farm Security Administration, and the Soil Conservation Service. These agencies have recommended especially the production of food and feed crops, soil improvement and conservation, diversification of the farming system, woodland development, family-sized farms, and increased ownership of family-sized units.

This study is concerned with the problem of these agricultural adjustments in Greene County. It is an analysis of the changes in progress and of changes which would be economically feasible in the area. In detail, its objectives are:

(1) To provide an analytical description of the present agricultural system;

(2) To evaluate the economic feasibility of alternative production enterprises;

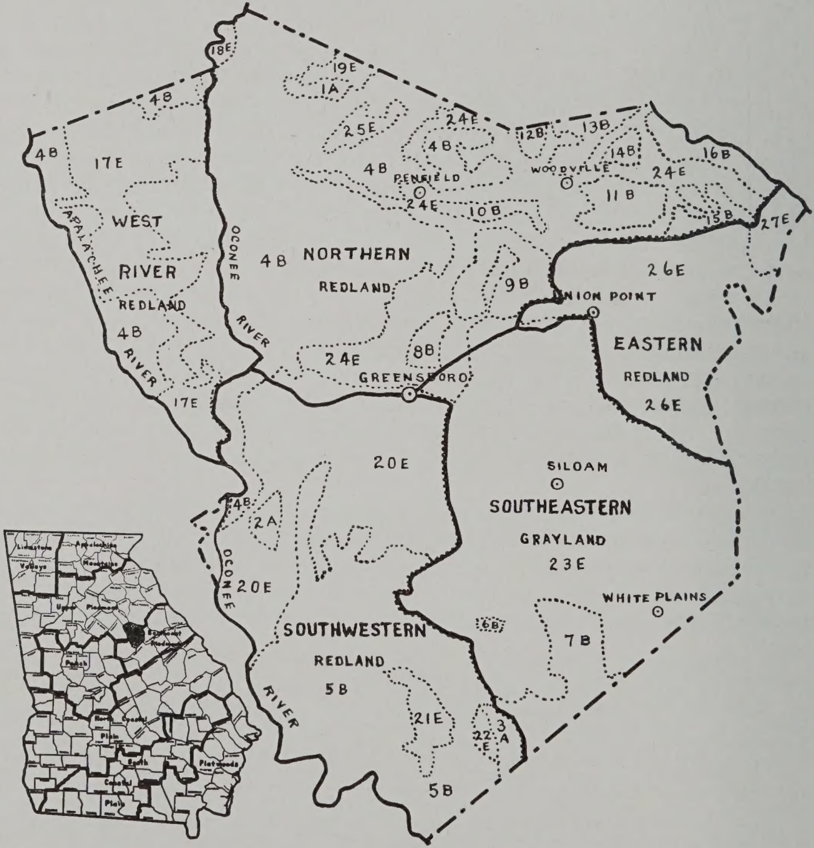

FIG. 1. *Farming sections, land use areas,[1] and location of Greene County, Georgia.*

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[1] The land use areas were delineated by the Greene County Land Use Planning Committee. "A" areas include land in farms which in its opinion should be retired from farming; "B" areas include land not in farms which should not be farmed; and "E" areas include land in farms which should continue in farms.

(3) To outline farm organizations that would increase farm returns;
(4) To study the effects of soil conservation practices on farm organization and incomes of major groups of farms;
(5) To determine the land, labor, and capital requirements of family-sized units for medium-sized families using different levels of farming equipment, and to estimate the effects that establishment of family-sized units would have on number of farms, land use, and income; and
(6) To provide an adequate farm-management basis for agricultural planning by bringing together the above phases of the study.

DESCRIPTION OF THE AREA

TOPOGRAPHY. In topography, Greene County is fairly typical of the Southeast Piedmont. The larger streams cut the uplands into major divides, which in turn are subdivided by smaller streams, until the whole area is a series of ridges, the surface varying from gently undulating to gently rolling and hilly. Along streams the ridges break off into belts of steep to rough broken land, and the topography is generally more irregular. There are small areas of glades, or flatwoods, having smooth to gently undulating surface features.

SOILS. The soils are primarily upland types and consist mainly of clay and sandy loams. The clay loams are usually darker than the sandy soils and are inherently richer in plant nutrients, but require heavier equipment and greater care in handling.[1] They make a ranker growth of cotton stalk, but their failure to mature the bolls as early as the sandy soils results in more severe boll weevil damage. This characteristic of the clay soils has been a primary cause of much greater abandonment of farmland in the areas where the clay soils predominate.[2] Fairly extensive areas of gravelly upland soils, quite droughty in nature, are found in the county. Bottomland soils, found only in occasional areas, play an important role in the organization of the farms on which they occur. The well-drained tillable acreages are used primarily for corn. Less satisfactorily drained areas are used for the production of native hay and pastures. Many of the larger livestock farms in the county are located along streams and have a fairly large acreage of such native grass and pasture land.

CLIMATE. Greene County has short, moderate winters, long, moderately hot summers, and an annual rainfall varying from

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[1] Fuller, G. L. and Hasty, A. H., *Soil Survey of McDuffie County, Georgia,* Bureau of Soils, U. S. Dept. of Agriculture.

[2] Three of the militia districts in Greene County where clay loams are dominant lost more than 60 per cent of their population between 1920 and 1930. Other districts in which clay soils are dominant lost at least 40 per cent. In comparison with this the Caldwell, Siloan, and White Plains districts, where the sandy loams predominate, lost only 19.5, 21.7, and 26.2 per cent of their population, respectively.—Bureau of Census.

35 to 73 inches, averaging 48 inches. The growing season (from the last killing frost in the spring to the first killing frost in the fall) is about 225 days, from about April 1 to November 10. The rainfall is generally heaviest in the winter and midsummer and lightest in the fall, spring, and early summer. This distribution is often unfavorable for seeding, germination, and growth of fall-sown crops.

The climate contributes to a lack of organic matter in the soils of this area. High temperatures aid the rapid oxidation of organic matter, and high rainfall tends to leach out the decomposed organic material. In addition, the torrential nature of much of the rainfall adds to erosion damage and results in low productivity.

HISTORICAL DEVELOPMENT OF THE AREA

By 1890 the Southeast Piedmont Area had emerged from the throes of the Reconstruction Period and had established a fairly stable rural economy. Almost three-fourths of the total land area was in farms and about 39 per cent was improved (Figure 2). About half of its 13,900 farms were operated on a crop-share basis, the bulk of them apparently cropper units on plantation farms. About 28 per cent of the farmers owned their farms. A one-crop system prevailed on all sizes of farms, irrespective of the tenure of the operator.

In Greene County a higher proportion of the total land was in farms, and 51 per cent of the land was improved (Figure 2). The plantation system predominated about the same as in the area as a whole, but a slightly lower proportion of the farmers operated on a crop-share basis (Table 1).

Between 1890 and 1910 there were few changes in the economy of the area or in the position of Greene County relative to the area as a whole. The number of farms increased during this period from about 13,900 to 20,900 in the area and from 1,989 to 2,830 in Greene County. The average value of land and buildings per acre increased from $6 to $17 in the area and from $8 to $21 in the county. By 1920 the war and the consequent high prices sent farm real estate prices to $43 an acre in the area as a whole and to $53 in Greene County.

In 1921 cotton production in this area collapsed. It dropped to 20 per cent of the 1910 production in the Piedmont Area as a whole and to 9 per cent of the 1910 production in Greene County. This collapse was caused primarily by the cotton boll weevil, which made its appearance in the latter part of the previous decade. Between 1920 and 1925 financial distress was severe enough to cause a 38 per cent decrease in the number of farms in Greene County and about 35 per cent decrease in the Southeast Piedmont Area as a whole. The organization of the remaining farms, however, changed very little.

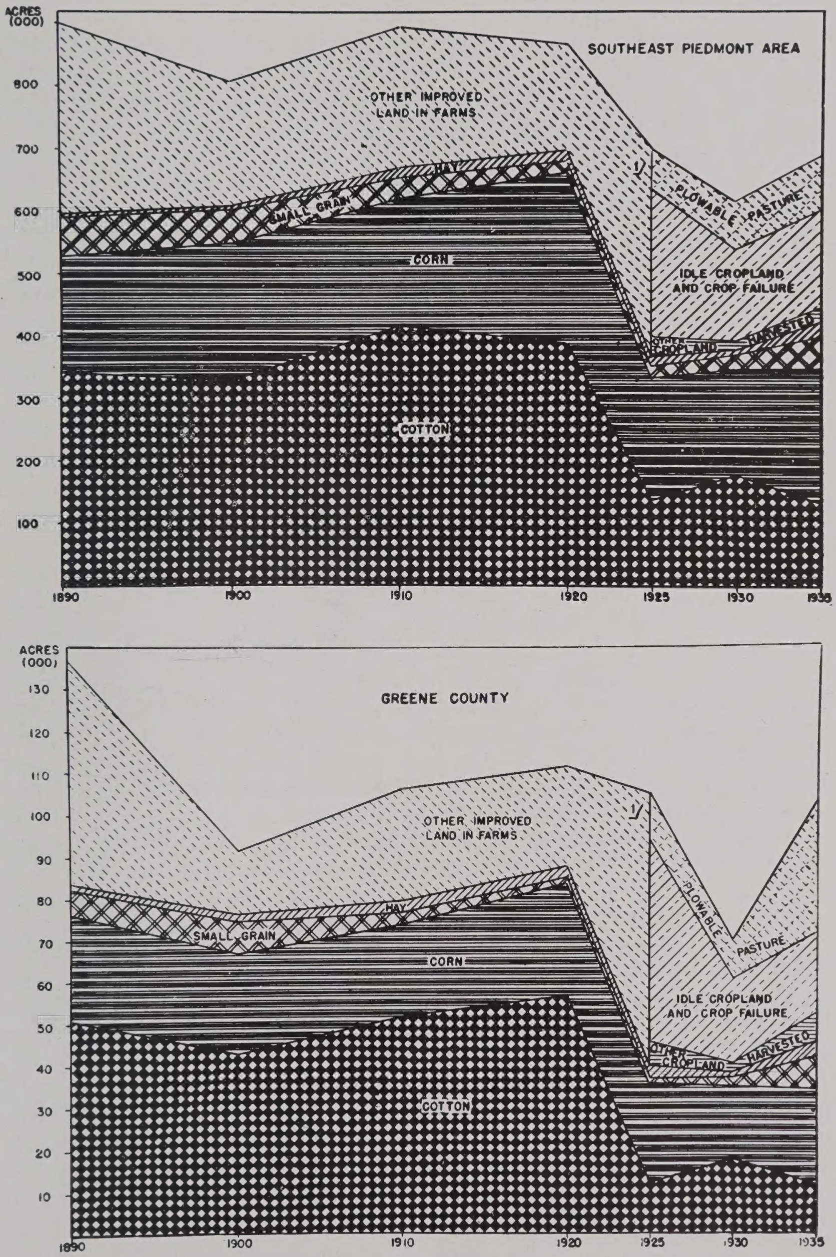

FIG. 2. *Changes in land use in Greene County and in the Southeast Piedmont Area, Georgia,* 1890-1935.

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[1] Beginning with the 1925 reports the census classification "improved farm land" was discontinued. Cropland plus plowable pasture is regarded as a comparable measure.

From 1925 to 1930 farmers in this area lived a hand-to-mouth existence, selling their timber, borrowing to pay accumulated interest on old debts, letting their buildings and equipment deteriorate, and gradually learning to produce cotton under boll weevil conditions. They practically ceased picking up squares (an early remedy), and began mopping and dusting, planting earlier, and growing early-maturing varieties. They continued to decrease production on heavy types of soil, which produce a rank growth favorable to the boll weevil. By 1930 the proportion of the total land area in farms was 54 per cent for Greene County and 51 per cent for the Southeast Piedmont as a whole. Cotton prices remained at fairly high levels until 1930. However, a drop to 5.7 cents and 5.8 cents per pound of lint in 1931 and 1932 seemed almost the final blow to the area.

Beginning in 1933, the income from cotton was supplemented by payments from the AAA, which played the major action-agency role in the area up to 1935. Cotton acreages decreased and corn acreages increased, but the AAA payments provided an

TABLE 1. Trends in the Agriculture of Greene County, Georgia, 1890–1935

Item	Unit	1890	1900	1910	1920	1925	1930	1935	1940
Rural population (1,000)	number	17	17	19	19	[1]	13	[1]	14
Number of farms (100)	number	20	21	28	30	19	16	18	13
Land per farm	acre	113	100	71	65	93	92	113	123
Percentage of total land in									
Farms	per cent	84	79	76	74	65	54	74	63
Improved land	per cent	51	34	40	42	39	26	39	34
Acres of improved land per capita of rural population	acre	8.0	5.5	5.8	5.9	[1]	5.5	[1]	6.4
Proportion of improved land in									
Cotton	per cent	37	47	49	51	11	25	12	11
Corn	per cent	19	26	21	29	22	25	22	23
Hay	per cent	1	2	3	3	3	2	4	6
Wheat	per cent	1	5	1	1	1	1	4	4
Oats	per cent	3	4	2	1	1	2	4	3
Livestock per 100 acres of improved land									
Workstock	number	2.3	3.4	3.9	4.3	2.8	3.4	2.6	2.5
Cattle	number	4.1	5.7	6.5	6.5	4.6	6.8	7.1	6.1
Hogs	number	6.9	7.2	5.7	6.4	3.4	4.6	3.6	4.2
Chickens	number	54	38	35	45	38	35	34	34
Percentage of farms operated by									
Owners	per cent	25.1	22.4	21.9	20.2	26.9	23.5	26.3	31.7
Croppers	per cent	[1]	[1]	[1]	36.9	33.2	36.0	27.5	13.0
Tenants excluding croppers	per cent	[1]	[1]	[1]	42.3	39.5	40.1	46.1	55.1
Managers	per cent	[1]	0.5	0.5	0.6	0.4	0.4	0.1	0.2
Value per acre of land and buildings	dollar	8	7	21	53	19	16	11	12

[1] Data not available.

United States Census reports.

impetus that caused more farmers to follow farm practices which had long been recommended.

In 1938 Greene County was chosen as the location for the first unified agricultural program in Georgia, which got under way, in part, in 1939. The aim in unified agricultural planning is the integration of all services and programs for the development of agriculture in the area. The Farm Security Administration had previously begun a concerted program in Greene County, as a demonstration of what could be done for low-income farm people with the help of the government rehabilitation program. In 1940 approximately 600 farm families in the county had received a rehabilitation loan for livestock and equipment needed to establish independent farm operating units. The development of conservation plans for these operating units, as well as for other farms in the county, was undertaken by farm supervisors and technicians from the Soil Conservation Service.

COLLECTION AND PREPARATION OF DATA

In order to describe the agriculture of the county, data on land use, yields, and tenure were tabulated from the 1938 AAA work sheets for 1,026 operating units. This is regarded as a complete coverage of Greene County farms. These data were supplemented by livestock information from mailed questionnaires returned by two-thirds of the farmers in the county. Farms with similar resources and organizations were classified into groups, and an organization representative of each major size and type group of farms was set up. Visits were made to 185 farms selected at random from the major size-type groups of farms to ascertain farm prices, costs, labor requirements, and other information. Visits were made to 49 additional farms for information on enterprises and practices found infrequently in the area.

Representative farm organizations in each size-type group were studied in detail. These organizations represent the situation for all farms in their particular group more closely than could any other organization. A closer approximation of actual conditions was also assured by studying each size-type group in five different sections of the county (Figure 1). These sections were arrived at by grouping the 27 land use areas delineated by the Greene County Land Use Planning Committee. Many similarities between these land use areas warranted their grouping to facilitate an economic analysis. Special emphasis was placed on conservation phases of adjustments by studying selected farms for which conservation plans had been prepared in each of the major size-type groups.[1]

In the main, incomes are based on average prices received and paid by farmers in the county in the period 1935-1939.

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[1] From the Greene County files, Piedmont Soil Conservation District, Greensboro, Georgia.

PRESENT AGRICULTURE IN THE FARMING SECTIONS OF GREENE COUNTY

On the basis of soil characteristics the five farming sections in Greene County have been grouped into grayland and redland areas. The Southeastern Section (Figure 1) commonly referred to as "grayland," is made up primarily of sandy loam soils. The Northern, Eastern, Southwestern, and West River sections, commonly called "redland," are made up primarily of clay loam soils. "Redland" and "grayland" soils differ in topography, fertility, workability, and present degree of erosion. Historically, the areas have differed greatly in farm organization. Furthermore, they differ in adjustment opportunities.

GRAYLAND SECTION

The Southeastern, the only grayland section in the county, contains a total of 60,417 acres of land. Twenty-eight per cent of this is cropland (Table 2). Cotton yields are higher than in other parts of the county, which is believed due largely to lesser boll weevil damages. This section was never organized into plantation units to so large an extent as the redland sections. At present, however, a larger percentage of its farms are medium-sized than in any other part of the county, and only one section has a larger percentage of farms with over 60 acres of cropland. One-half of the farms are owner-operated, which is a higher proportion than in the county as a whole. The percentage of farms in the cotton system is 85, which is higher than in the redland sections. Eleven per cent are in a cotton-livestock system and 4 per cent are in subsistence and part-time systems.

The most common woodland acreages are 30 on the small farms and 137 on large farms (Table 3). The percentage of this in a "highly desirable" condition is 11 and 19 per cent on the small and large farms respectively.

Both the Land Use Planning Committee and the Land Use Capability Survey indicate an opportunity for considerable increases in cropland in this section. About 80 per cent of the section is in land use capability classes I, II, and III, classes of land which could be cultivated with proper conservation practices. Development of this land for cropland uses offers an opportunity to increase the size of present farm units as well as to set up additional units.

REDLAND SECTIONS

The redland sections have been combined in the woodland analysis. The usual woodland acreage in the redland sections is 49 on small farms and 119 on large farms. The 4 per cent of "highly desirable" woodland on the small farms, compared with the 20 per cent on the large farms, suggests that cuttings in recent years on the small farms have been heavier than on large farms (Table 3).

TABLE 2. TOTAL LAND AREA, LAND USE CAPABILITIES, CROPLAND ACREAGE, NUMBER OF FARMS, DISTRIBUTION OF FARMS BY TENURE, SIZE, AND TYPE, AND CROPS AND LIVESTOCK IN FARMING SECTIONS, GREENE COUNTY, GEORGIA

ITEM	UNIT	GRAY-LAND SECTION	REDLAND SECTIONS				ALL SECTIONS
		SOUTH-EASTERN	EASTERN	NORTHERN	WEST RIVER	SOUTH-WESTERN	
Total land area[1]	acre	60,417	23,515	91,199	27,618	59,800	262,549
Percentage of land by capability classes[2]							
I and II	per cent	9	10	12	16	12	11
III	per cent	71	62	35	31	27	44
IV	per cent	6	15	13	21	15	13
V	per cent	14	13	40	32	46	32
Total	per cent	100	100	100	100	100	100
Acres of cropland[3]	acre	16,967	4,246	10,370	5,325	7,823	44,731
Percentage of total land in cropland[3]	per cent	28	18	11	19	13	17
Number of farms[3]	number	328	125	268	111	194	1,026
Distribution of farms by tenure[3]							
Owner-operated	per cent	50	37	45	50	47	47
Tenant-operated	per cent	50	63	55	50	53	53
Total	per cent	100	100	100	100	100	100
Distribution of farms by acres of cropland[3]							
30 and less	per cent	38	67	60	45	57	52
30.1–60	per cent	40	24	25	31	28	31
60.1 and above	per cent	22	9	15	24	15	17
Total	per cent	100	100	100	100	100	100
Distribution of farms by types[3]							
Cotton farms	per cent	85	77	78	80	84	81
Cotton-livestock farms	per cent	11	5	10	13	8	10
Subsistence and part-time farms	per cent	4	18	12	7	8	9
Total	per cent	100	100	100	100	100	100
Percentage of cropland in[3]							
Cotton	per cent	23	24	24	22	27	24
Corn	per cent	38	42	37	34	42	38
Other general crops	per cent	8	12	15	24	12	13
Non-soil-depleting crops	per cent	30	22	23	20	19	24
Livestock numbers[4]							
Workstock	number	678	225	497	249	376	2,025
Cattle	number	1,856	451	1,286	673	912	5,178
Hogs	number	1,223	480	1,031	490	708	3,932
Chickens	number	9,277	2,979	6,417	2,815	4,277	25,765

[1] Excluding area occupied by towns.

[2] Estimates made from Land Use Capability Survey, *Physical Land Conditions in Greene County, Georgia,* Physical Land Survey No. 23, Soil Conservation Service, by technicians acquainted with the county and with the Land Use Capability Survey. Land class I includes land suitable for cultivation without special conservation practices; II, land suitable for cultivation with only simple practices; III, land suitable for cultivation with complex or intensive practices; IV, land not suitable for continuous cultivation; and V, land not suitable for cultivation.

[3] Based on 1938 AAA records, Greene County, Georgia.

[4] Based on mailed questionnaries and personal interviews.

EASTERN SECTION. The Eastern Section located around Union Point contains 23,515 acres, of which 4,246 acres are cropland (Table 2). It is delineated from other redland sections primarily because of more level topography and for its part-time farming possibilities. Its farms have larger fields and are less eroded. Almost one-fifth of the farms are in a subsistence and part-time system, and more than two-thirds have 30 acres and less cropland. More of the farms are tenant-operated than in any other section of the county. Adjustments could be made in both size and number of farms. Estimates based on the Land Use Capability Survey show 72 per cent of the section suitable for cultivation with proper conservation practices compared with only 18 per cent now in cultivation.

TABLE 3. FARM WOODLAND: ACREAGE AND CONDITION CLASS GROUPS BY SIZE OF FARMS IN FARMING SECTIONS, GREENE COUNTY, GEORGIA

ITEM	GRAYLAND SECTION[1]		REDLAND SECTIONS[2]	
	SMALL[3]	LARGE[4]	SMALL[3]	LARGE[4]
	acres	*acres*	*acres*	*acres*
Usual woodland acreage	30	137	49	119
Percentage of woodland stand by condition class groups	*per cent*	*per cent*	*per cent*	*per cent*
Highly desirable	11	19	4	20
Desirable	59	38	57	43
Least desirable	30	43	39	37
Total	100	100	100	100

[1] Southeastern Section.
[2] Eastern, Northern, West River, and Southwestern farming sections. Apparently there are no important differences between conditions of woodland stands in these sections.
[3] Operating units with 30 acres and less of cropland are classed as small farms.
[4] Operating units with 60.1 acres and above of cropland are classed as large farms. Woodland conditions on medium-sized farms with 30.1 to 60 acres of cropland are very similar to the conditions found on large farms.
Farm Woodland Survey by E. V. Brender, Soil Conservation Service.

NORTHERN SECTION. In the Northern Section the soils are of a very erosive clay type. The susceptibility of cotton on these soils to boll weevil infestation contributed materially to the high proportion of farm abandonment during the 1920's. Two of its militia districts lost more than 60 per cent of their total population from 1920 to 1930. Seventy-eight per cent of the farms follow a cotton system. Ten per cent follow a cotton-livestock system. Most of the livestock farms are medium-sized and large units. Sixty per cent of the farms have 30 acres or less of cropland. Tenants occupy 55 per cent of the farm units. Only 11 per cent of the total land area is in cropland. The County Land Use Planning Committee indicated that most of the section is unsuited for farming. If almost four-fifths of the farm families must continue to live on the income from cotton alone, then the section probably should be retired from agriculture. But there is the possibility of making adjustments through which the section could support a fairly large number of well-balanced operating units.

WEST RIVER SECTION. The West River Section, between the Apalachee and the Oconee rivers, contains 27,618 acres of land (Table 2). It differs from the other redland sections primarily in possessing areas of bottomlands especially suitable for pasture and feed crops. This factor has contributed to the development of a cotton-livestock system of farming on one of every eight farms. The upland soils are similar to those in other redland sections, but are believed to be slightly more productive. Eighty per cent of the farms follow a cotton system and about one-third have 30.1 to 60 acres of cropland. There are very few part-time and subsistence farms. Several very good stands of bottomland hardwoods are found, and a part of the land which they occupy can be developed into excellent pasture after the timber has been cut. There are several other under-developed land areas in this section. Estimates based on the Land Use Capabilities Survey indicate that 47 per cent, or approximately 13,000 acres, could be used for crops or pastures if suitable conservation practices were used.

SOUTHWESTERN SECTION. The Southwestern Section differs from other redland sections in that a larger proportion of its soils range from stiff red clays to loamy clays and are rather difficult to work. It would be difficult to outline a successful livestock management plan which requires the grazing of cultivated land because of puddling on soils of such heavy texture. Cotton yields are lower than in other redland sections. The plantation units, which flourished before the advent of the boll weevil, crumbled with the loss of their primary source of cash income. Migration from the area was on a large scale. Despite the widespread farm abandonment in this section, a smaller part of its land is suited for increasing the acreages of crops and pastures than in any other section of the county.

PRODUCTION PRACTICES

A comparison of usual crop and livestock practices on the farms surveyed reveals a fairly well-defined pattern of practices, with some significant variations due to differences in soils and in kinds of equipment used. As only the more significant variations could be shown, these data must be modified when they are applied to individual farms where practices differ significantly from the usual.

CROPS

Field work on crops is characterized by the large amount of work with one-mule equipment and with hand labor. For some operations, such as mowing hay, two-mule equipment is used altogether.

COTTON. In organizing a farm, the operator usually chooses for a major enterprise one that is well adapted to conditions on his farm and that is likely to yield the largest return from his resources. On most farms in Greene County, cotton appears to fulfill these specifications. It is well adapted to the climate and soils, its production is comparatively simple, the production period is short, the crop is readily converted into cash, and the return over variable cash costs per acre is high compared with that of other crops currently raised (Table 4).

With present production methods the peak demand for cotton labor comes during the planting and chopping season (Table 5). The widespread use of one-mule equipment with its higher man-labor requirements, the hand labor required in chopping, and the comparatively low yields, which lessen the amount of labor needed for harvesting, all combine to cause the most acute peak in the spring and early summer. At other times there is a large supply of surplus labor on family-sized cotton farms which can be used on other enterprises or for non-farm work.

CORN. Corn, the second most important crop, is grown chiefly for feed and food. Its labor peak comes at about the same time as the planting and chopping peak on cotton (Table 5). As cotton usually takes precedence over corn and receives first attention, the consequent lack of timeliness in doing field work on corn sometimes results in relatively low yields. The spring labor requirement for an acre of corn is about equal to that required to produce 0.7 acre of cotton. With usual yields the normal market value of an acre of cotton is nearly double that of an acre of corn (Table 4).

Much of the corn is interplanted with cowpeas immediately after the last cultivation, particularly in the redland sections. The peas are usually picked for seed and food and the vines plowed under. In the grayland section, a considerable acreage of corn is interplanted with velvet beans. These are generally pulled in the pod mainly for feed. The total feed produced from an acre of corn with velvet beans is estimated at 865 pounds of digestible nutrients compared with 680 pounds per acre from corn planted alone. The harvesting of velvet beans by hand requires considerable labor, but comes at a slack time. Expansion of this enterprise in both the grayland and the redland sections appears to offer good prospects for increasing feed production. In cases where small grains follow cotton and corn, the acreage of corn that can be interplanted with velvet beans may be limited because of the difficulty of seeding small grains after the beans. In some communities, mostly in the grayland section, several farmers interplant corn with soybeans. Soybeans are

TABLE 4. RETURN ABOVE VARIABLE CASH COSTS FROM SPECIFIED CROPS PER ACRE AND PER HOUR OF MAN LABOR, GREENE COUNTY, GEORGIA[1]

ITEM	COTTON	CORN ALONE	WHEAT	OATS	COW-PEAS FOR SEED
GRAYLAND SECTION					
Usual yield	Lint 195 lbs. Seed 350 lbs.	Grain 11.0 bus. Fodder 100 bund.	8.0 bus.	18.0 bus.	4.5 bus.
Gross value	$24.05	$10.00	$8.40	$10.10	$6.45
Cash costs					
Seed	0.43	0.10	1.05	1.50	1.05
Fertilizers	4.05	0.60	1.31	1.30	
Poison					
Harvesting and threshing			0.84		
Ginning and baling	1.17				
Total	$5.65	$0.70	$3.20	$2.80	$1.05
Return above variable cash costs	18.40	9.30	5.20	7.30	5.40
Man labor per acre (hours)	103.4	53.6	24.0	19.8	39.8
Return per hour of man labor	$0.18	$0.17	$0.22	$0.37	$0.14
REDLAND SECTIONS					
Usual yield	Lint 180 lbs. Seed 325 lbs.	Grain 10.0 bus. Fodder 100 bund.	8.7 bus.	18.0 bus.	3.5 bus.
Gross value	$22.20	$9.20	$9.15	$10.10	$5.00
Cash costs					
Seed	0.43	0.10	1.05	1.50	1.05
Fertilizers	4.18	0.60	1.75	1.30	
Poison	1.11				
Harvesting and threshing			0.90		
Ginning and baling	1.08				
Total	$6.80	$0.70	$3.70	$2.80	$1.05
Return above variable cash costs	15.40	8.50	5.45	7.30	3.95
Man labor per acre (hours)	107.6	53.6	24.0	19.8	39.8
Return per hour of man labor	$0.14	$0.16	$0.23	$0.37	$0.10

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[1] Based upon usual practices and prices as shown in Appendix Tables 1–4.

easier to save as hay than other interplanted crops because the plants may be individually pulled or cut and cured. Unlike cowpeas, however, the varieties of soybeans now grown do not provide the farm family with food.

Fodder (corn leaves) is a principal source of roughage, particularly on small farms. The probable reduction in corn yields and the high labor requirement involved (one man can pull only about 125 bundles in a day) both indicate that pulled fodder should be considered only as an emergency source of feed.

SMALL GRAINS. On most of the small farms and many of the medium-sized farms the small grains are cut with hand equipment. With this method, small grain harvesting conflicts with

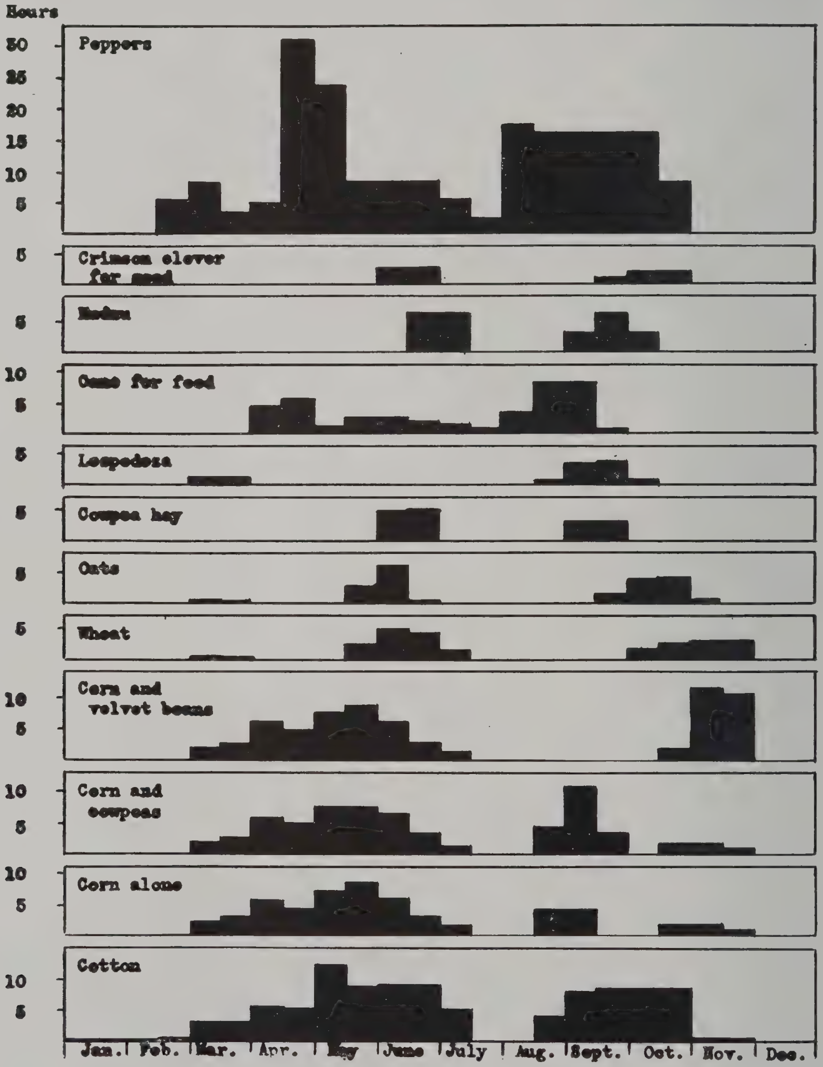

FIG. 3. *Usual distribution of man labor per acre of specified crops, Greene County, Georgia.*

cultural operations on cotton, corn, and other crops. If there is enough labor for cotton and corn in the spring and early summer, for each acre of these crops about one-half acre of small grains can be fitted into the cropping system without hiring extra help. About 1.6 acres of oats harvested with hand equipment will displace one acre of corn. With current yields this acreage of oats produces about 1,000 pounds of digestible nutrients compared with 680 pounds per acre of corn. Oats followed by lespedeza yields about 2,250 pounds of digestible nutrients compared with 865 pounds for corn interplanted with velvet beans.

Modern harvesting equipment reduces the labor needed for harvesting small grains. The custom rate commonly charged for combining is $1.50 per acre plus one-tenth of the grain. The custom rate for mowing oats for hay is $1 to $1.30 per acre.

Wheat production practices are similar to those for oats, except for slightly heavier fertilization. Generally the entire wheat acreage is threshed.

SORGHUM CANE. Cane for roughage provides a large amount of feed per acre. It is fed both as silage and as fodder (whole stalk) mainly on the large livestock farms. Its production conflicts somewhat with cotton and corn for labor at planting time, though there is a sufficiently long period suitable for planting that it can be fitted into the cropping system on most farms (Table 5). High labor requirements for harvesting usually come at a period when very little other work is being done. The usual fertilizer application consists of 200 pounds of a 3-9-3 per acre (Appendix Table 2). On livestock farms this is usually supplemented with manure.

Some cane for syrup is grown on most of the farms. For good syrup the cane needs to be made up immediately when ripe.[1] Labor requirements are highest at this time, but do not conflict greatly with other crops since the acreages are generally small. Syrup is usually made for home use only.

COWPEAS. Cowpeas are grown both for seed and hay. When harvested for seed the labor peak at harvesting time competes with cotton picking and fodder pulling (Table 5). Cowpeas for hay usually follow small grains. Often they are seeded in a rough fashion since there is keen competition between various farm operations for labor at this time.

ANNUAL LESPEDEZA. Lespedeza is gaining favor both as a source of hay and as a soil builder. It is adapted to a wide range of soil types, requires little labor in seeding, and fits well into rotation systems. The crop is sown usually in small grains in March at the same time that nitrates are applied. The hay is usually harvested between August 20 and October 10. Seed can be harvested in October or November.[2]

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[1] Boggess, Thomas S., and Bailey, J. E., *Sorghum in North Georgia,* Circular 121, Georgia Experiment Station, Experiment, Georgia, February 1940.

[2] Source: Interview with agronomists at the Georgia Experiment Station.

LESPEDEZA SERICEA. Lespedeza sericea, a perennial, makes a fairly good growth on poor eroded land. Recommended seeding and fertilizer rates are 30 pounds of scarified seed with applications of 300 to 400 pounds of superphosphate or its equivalent. The seed is sown usually in the latter part of March or April. Hay can be harvested the second year. Yields may run about a ton per acre from two cuttings.

WINTER LEGUMES. Crimson clover, Austrian peas, and hairy vetch are grown primarily for green manure, and in some cases clover and vetch in combination with small grains are used for hay. Winter legumes are usually planted in cotton or corn middles. It is difficult to seed them in corn interplanted with velvet beans. Fertilizers are seldom applied. Inoculation of the seed is essential especially when grown in a field for the first time.

TABLE 5. USUAL AMOUNTS AND DISTRIBUTION OF MAN-HOURS AN

ITEM	JAN.		FEB.		MARCH		APRIL		MAY	
	1ST HALF	2ND HALF	1ST HALF	2ND HALF	1ST HALF	2ND HALF	1ST HALF	2ND HALF	1ST HALF	2ND HALF
MAN-HOURS										
Cotton[1]	0.6	0.6	0.6	0.7	3.3	3.4	5.8	5.6	12.2	9.0
Corn alone[1]					2.2	2.8	5.5	4.1	7.2	8.6
Corn and cowpeas[1]					2.2	2.8	6.0	5.1	7.7	7.6
Corn and velvet beans[1]					2.2	2.8	6.0	5.1	7.7	8.6
Wheat harvested by hand					0.7	0.6				2.5
Wheat harvested by binder					0.7	0.6				0.4
Oats harvested by hand					0.6	0.5				2.7
Oats harvested by binder					0.6	0.5				0.5
Cane for feed							4.3	5.7	1.2	2.6
Cowpeas for seed									4.2	6.4
Cowpeas for hay										
Annual lespedeza					1.0	1.0				
Sericea establishment					2.2	2.0	3.9	4.0	1.8	1.3
Sericea after establishment									3.6	3.8
Crimson clover used for green manure										
Crimson clover harvested for seed										
Austrian peas										
Pimiento peppers				5.5	8.1	3.6	4.8	30.9	23.7	8.2
Kudzu establishment										
First year	4.8	4.6	4.6	4.5	4.4		1.6	1.7		
Second year										
Kudzu after establishment										
MULE-HOURS										
Cotton[1]	0.6	0.6	0.6	0.7	3.3	3.4	5.8	5.6	4.2	5.0
Corn alone[1]					2.2	2.8	4.7	2.5	3.9	2.6
Corn and cowpeas[1]					2.2	2.8	5.2	3.5	4.4	2.6
Corn and velvet beans[1]					2.2	2.8	4.7	2.5	3.9	2.6
Wheat harvested by hand										
Wheat harvested by binder										0.8
Oats harvested by hand										
Oats harvested by binder										1.0
Cane for feed							4.3	5.7	1.2	2.6
Cowpeas for seed									4.2	6.4
Cowpeas for hay										
Annual lespedeza					0.5	0.5				
Sericea establishment					2.2	2.0	2.5	2.6	0.4	0.3
Sericea after establishment									4.2	4.1
Crimson clover used for green manure										
Crimson clover harvested for seed										
Austrian peas										
Pimiento peppers					2.6	3.6	4.8	5.3	3.6	2.6
Kudzu establishment										
First year	0.4	0.4	0.4	0.3	0.2		1.6	1.7		
Second year										
Kudzu after establishment										

[1] Planting dates for these crops in the redland sections are usually 10 days to 2 weeks earlier than in the grayland section

Winter legumes compete with small grains for labor at planting time (Table 5) though on most farms sufficient labor is available in this period to plant winter legumes on all of the rotated cropland not in small grains. In some years it is difficult to secure a stand because of long periods of dry weather. In other instances power and equipment, particularly on small farms, are inadequate to plow under the heavy growth obtained.

NATIVE GRASS HAY. Native grasses make a comparatively rank growth on bottomland soils. They are an important source of hay and pasture on some of the larger livestock farms. Their acreage could be expanded by clearing brush and by draining some of the bottomland soils.

KUDZU. Kudzu, a perennial legume, is an excellent ground

ULE-HOURS PER ACRE FOR SPECIFIED CROPS, GREENE COUNTY, GEORGIA

June		July		Aug.		Sept.		Oct.		Nov.		Dec		Total
ST ALF	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	1st half	2nd half	
9.1	9.1	5.0			3.9	8.1	8.4	8.4	8.4	0.6	0.6			103.4
6.2	2.8	1.4			4.2	4.1			1.8	1.8	0.9			53.6
6.5	3.4	1.4			4.2	10.7	3.4		1.8	1.8	0.9			65.5
6.2	2.8	1.4							1.8	11.4	10.5			66.5
5.0	4.1	1.4						1.7	2.6	2.7	2.7			24.0
0.9	2.0	1.4						1.7	2.6	2.7	2.7			15.7
6.1	0.5						1.4	3.7	3.8	0.5				19.8
1.6	0.5						1.4	3.7	3.8	0.5				13.1
2.6	2.0	1.6	0.8	3.5	8.2	8.2	0.6							41.3
4.0	3.9	1.3			6.7	6.7	6.6							39.8
4.8	4.9					3.0	3.0							15.7
					0.5	3.2	3.5	0.6						9.8
1.2	0.6													17.0
			3.5	3.6										14.5
							0.8	1.7	1.8					4.3
2.5	2.5						0.8	1.7	1.8					9.3
								1.0	1.0	0.9				2.9
8.2	8.2	5.3	2.4	17.2	16.0	16.0	16.0	16.0	8.0					198.1
3.3	3.4			1.6	1.7							0.4	0.4	37.0
0.8	0.9													1.7
	6.3	6.2				3.1	6.3	3.1						25.0
5.1	5.1	3.0				0.3	0.4	0.5	0.6	0.6	0.6			46.0
2.6	2.8	1.4							0.6	0.6	0.3			27.0
2.6	2.8	1.4							0.6	0.6	0.3			29.0
2.6	2.8	1.4							0.6	0.6	0.3			27.0
								1.7	2.3	2.3	2.4			8.7
1.7	1.2	0.2						1.7	2.3	2.3	2.4			12.6
0.5	0.5						1.4	3.4	3.5	0.4				9.7
2.7	0.5						1.4	3.4	3.5	0.4				12.9
2.6	2.0	1.6	0.8	1.5	3.0	3.0								28.3
4.0	3.9	1.3												19.8
4.3	4.4					5.0	5.0							18.7
					1.2	3.2	2.5	0.6						8.5
0.2	0.1													10.3
			4.1	4.2										16.6
							0.6	1.3	1.4					3.3
							0.6	1.3	1.4					3.3
								0.6	0.6	0.5				1.7
2.6	2.6	2.5	2.4	3.0	1.8	1.8	1.8	1.8	1.0					43.8
3.3	3.4			1.6	1.7							0.4	0.4	15.8
0.8	0.9													1.7
	10.0	10.0				5.0	10.0	5.0						40.0

se data are for the grayland section.

cover. It is a good hay crop, especially adapted for use on steep and erosive soils, and may be expected to yield a ton or more of hay per acre under usual Greene County conditions. The crop may be started from either seedlings or crowns set during the winter or dormant season. About 300 pounds per acre of 16 per cent phosphate, or its equivalent, are usually applied at setting time. Cultivation is needed mainly in the first and second years. Kudzu may be used for either hay or pasture beginning in the third year after establishment. For hay, it is cut two or more times per year. The first cutting is ordinarily made between June 15 and July 15, and a second cutting between September 1 and October 15. Unlike most other hay crops, kudzu does not deteriorate greatly in feed value if the cutting is delayed for two or three weeks.[1] This makes it easy to fit the operation in with other farm work. Some difficulty is experienced in cutting kudzu because of its viny growth. A special mower attachment may be used to reduce this difficulty. Also the hay is not easily raked, which often makes it necessary to handle the entire crop with forks.

PIMIENTO PEPPERS. Pimientos were grown in Greene County for the first time in 1939. The market for them is largely limited to the acreage for which farmers can obtain advance contracts. They compete with cotton and corn for labor in the planting and early cultivating season. One acre of pimientos displaces sufficient labor to grow about 2.5 acres of cotton. However, pimientos furnish profitable work to the farm family after cotton and corn are "laid by" and before cotton picking begins (Table 5). The largest labor-consuming operations are the setting of plants and harvesting. These operations are usually performed by hand.

PASTURES

There is very little improved pasture in Greene County. Bermuda, Dallis, and carpet grasses, and lespedeza are the principal pasture plants. The grazing season extends from about April 1 to November 1. On the upland, carrying capacity is approximately one cow to three acres and on the bottomland, about one cow to two acres. In some cases a carrying capacity of one cow per acre was reported for bottomlands.

On many farms increases in livestock are dependent upon pasture improvements. Pasture improvements needed are clearing brush, fertilizing, liming, seeding, and in some cases contouring. Clearing brush and contouring will not require an addition to the labor force if done in slack seasons. On most pastures initial applications of approximately one ton of limestone and 500 pounds of superphosphate per acre are needed. Additional applications of one ton of limestone every eight years and 400 pounds of superphosphate per acre every three years are desirable. The seed mixture commonly recommended in the county to be sown on bermuda sod is five pounds of Dallis grass, two pounds of white dutch clover, and ten pounds of lespedeza per acre. With 1940 prices, this mixture costs approximately $3.50 per acre. Experimental data indicate that very good results may be obtained from a simpler mixture, such as winter clover[1] seeded in bermuda sod.

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[1] Miles, I. E., and Gross, E. E., *A Compilation of Information on Kudzu,* Bulletin 326, Mississippi Agricultural Experiment Station, State College, Mississippi, January 1939.

Supplemental grazing is needed. This can be obtained in late winter and early spring from thick seedings of rye grass and crimson clover. Kudzu fits in well during dry summer periods.

LIVESTOCK

Livestock products for home use are of major importance in any consideration of agricultural adjustments in this area. Many farm families have diets below minimum adequate requirements.[2] In 1939 about six per cent of the farm operating units in Greene County had neither cows nor poultry.

About ten per cent of the farmers in the county produce one or more kinds of livestock, principally beef or dairy products, on a commercial basis. Sheep, hogs, and poultry are important sources of cash income on a few farms. Generally, livestock enterprises have been brought into the farm business as an addition to cash crops.

DAIRY CATTLE. The family milk cow contributes a large part of the non-cash income of farm families in this area. Feeds for family cows vary widely. Fodder (corn leaves) is the main source of roughage, particularly on the smaller farms. Concentrates consist mainly of cotton seed, cottonseed meal (secured by trading cotton seed), corn, wheat bran, and velvet beans. Very little feed is purchased.

Farmers with a commercial dairy enterprise sell either sour cream or whole milk. Sour cream is sold to nearby creameries and whole milk primarily to city market channels.

Sour cream is produced primarily on a small-scale basis. Its production requires a comparatively small outlay for buildings and equipment, and the size of the enterprise can be easily adjusted to particular farm situations. The cattle kept are mainly grade Jerseys or Guernseys. Beef-type bulls are used on some farms to produce better quality veal calves. In periods of low cream prices farmers feed increased amounts of milk to calves. Most of the feed is grown on the farm. The usual amount fed per cow contains about 1,900 pounds of digestible nutrients. Converted into pounds of common feed, this is about 670 pounds

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[1] Bledsoe, R. P., and Sell, O. E., *Permanent Pastures,* Bulletin 207, Georgia Experiment Station, Experiment, Georgia, September 1940.

[2] Steanson, Oscar et al. *Food and Feed Needs in Georgia,* Bureau of Agricultural Economics, May 1939 (mimeographed).

TABLE 6. USUAL AMOUNT OF FEED FED, MISCELLANEOUS REQUIREMENTS, AND PRODUCTION RATES PER HEAD OF VARIOUS CLASSES OF LIVESTOCK IN GREENE COUNTY, GEORGIA

ITEM	Unit	DAIRY CATTLE FOR			BEEF CATTLE		HOGS		CHICKENS	MULES
		SALE OF		HOME USE	YOUNG CATTLE	COWS[1]	SOWS	FATTENING HOGS		
		WHOLE MILK	CREAM							
		units	*units*	*units*	*units*	*units*	*units*	*units*	*units*	*units*
Usual inputs										
Feed										
Cottonseed meal	pound	1,500	670	250	400[2]	800[2]				
Velvet beans	pound	400	820		400[2]	800[2]				
Corn	pound			700	370[2]	740[2]	400	400	30	2,800
Wheat or shorts	pound						300	300	20	
Wheat bran	pound			180						
Mash	pound								25	
Oats	bushel			2						25
Hay	pound	1,100	1,700		1,100[3]	2,200[3]				
Fodder	bundle			600						500
Silage	pound	5,500								
Stover	pound				1,500[3]	3,000[3]				
Salt	pound	50	50	40	20	40				40
Milk for calf	cwt.	8.5	10	10		[4]				
Breeding fees	dollar	1	1	1	1		2			
Hauling milk, cwt.	cent	40								
Hauling per head sold	cent				75	75				
Miscellaneous expense	cent	10	10			10				200
Man labor	hour	150	170	170	[5]	[5]	44	30	2	120
Production										
Milk	cwt.	48	(43)	43						
Butter fat	pound		194							
Eggs	dozen								12	
Gain: calf kept	pound		150	125		485				
yearling stock	pound				285			225		
Offspring raised	number	1	1	1		0.75[6]	8[7]			
Days worked	day									150

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[1] Usual inputs and production are per cow plus the calf kept over as a yearling.

[2] Only one of these concentrates in these amounts or a mixture of the three in an equal quantity is usually fed per animal.

[3] Only one of the roughages in these amounts is usually fed.

[4] Calves usually run with cows.

[5] Inadequate data.

[6] Seventy-five per cent calf crop.

of cottonseed meal, 820 pounds of velvet beans in the pod, and 1,700 pounds of hay (Table 6). This is in addition to pasture. Milk production per cow averages about 4,300 pounds with a butterfat content of 4.5 per cent. About 1,000 pounds are fed and 3,300 pounds are available for home use and for sale. The labor used per cow is about 170 hours, with the peak coming in the winter months.

Whole milk production is usually more specialized than sour cream production. Investment in buildings and equipment is comparatively large. The cows are usually fed about 2,900 pounds of digestible nutrients plus pasture. This ration usually includes about 1,500 pounds of cottonseed meal, 400 pounds of velvet beans in the pod, 1,100 pounds of hay, and 5,500 pounds of silage. About 4,800 pounds of milk are produced per cow. The general practice is to keep all heifer calves and dispose of the bull calves at birth. The calves kept are fed about 850 pounds of milk. This leaves an average of 4,375 pounds of milk per cow available for sale. Cash costs for hauling and refrigeration in transit in 1939 amounted to 40 cents per hundred pounds or a total cost of $18 per cow. About 150 hours of man labor are used per cow—20 hours less than on farms selling sour cream—a result of the larger size of business and better arrangement of feeding facilities on the whole milk farms.

BEEF CATTLE. Beef cattle are found primarily on the large farms with considerable pasture acreages. Most of the farmers in beef production keep a breeding herd, mainly of native dairy stock, and sell yearlings and two-year-olds. In some cases, heifers are bred and sold at freshening time for home-use milk production. A few young bulls, mainly from herds that have some purebred beef stock, are sold locally for breeding purposes. Most of the cattle are grazed on native pasture much of the time. In addition, an average of about 800 pounds of concentrates, corn, velvet beans, cottonseed meal, or a mixture of these, is fed per cow (including calf until weaned). Usually about 2,200 pounds of hay or 3,000 pounds of stover are fed (Table 6). Calves are usually weaned at about 200 pounds. On a few farms with large acreages of bottomland pasture little additional feed is provided.

HOGS. The production of hogs is mainly for home consumption, except that in a few cases pigs are raised for sale to neighboring farmers. The low grain production makes it difficult to produce fat hogs for sale. On an average the sows farrow two litters of five pigs each with a loss of one pig per litter. The feed consists chiefly of corn and garbage. In a number of cases, hogs and brood sows range over a large part of the farm after harvest. Concentrates usually consist of an equivalent of 400 pounds of corn and 300 pounds of wheat or shorts per brood sow per year or per fattening hog reaching a weight of 225 pounds (Table 6).

CHICKENS. There are no large commercial poultry flocks in the county. A few farmers, however, have small laying flocks as an important source of income. On these farms the feed used amounts to approximately 75 pounds per hen (Table 6). Some mash is purchased in addition to home-grown feed. These farmers reported a production of about 144 eggs per hen. Approximately two hours of labor per hen are used in handling the flock. For the average farm flock both feeding rates and production are lower.

WORKSTOCK. Mules predominate as a source of farm power in the county. Most of the mules are between the ages of 6 and 14 years and weigh about 1,000 pounds. The average life is about 18 years, and the work life 14 years. On the basis of the estimated value of $187 for a four-year-old mule, the annual depreciation amounts to about $13. Feed per mule averaged about 50 bushels of corn, 25 bushels of oats in the straw, and 500 bundles of corn fodder (leaves). Often hay is substituted for the fodder (Table 6). In addition, the workstock are on pasture for 40 to 50 days during the summer.

WOODLANDS

All too often farm woodlands are considered as something apart from the rest of the farm business. Good woodland management should become an integral part of the farm operations, and systematic selective cutting should become a common practice. Man and mule labor could be used profitably both in woodland improvement practices and in harvesting woodland products at times when there is little else to be done on the farm.

Woodlands comprise about 38 per cent of the farm area in Greene County.[1] A survey[2] of woodland conditions in the county indicates that 17 per cent of the stands can be classed as "highly desirable," i. e. they are mature or nearly mature stands from which immediate returns can be obtained. The most important condition-class group, the "desirable" stands, make up 45 per cent of the total. These are stands from which the immediate returns will not be large, or stands well stocked with young growth.

It is the usual practice to sell woodland products on the stump. Stumpage prices before the war boom were about $4 per thousand board feet. Timber cut and delivered to the mill sold at the same time for about $5 per thousand board feet. About one-half man day of labor is needed to cut and deliver 1,000 board feet of timber. Man labor requirements for fuel wood are about one and one-third days per cord.

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[1] United States Census reports.

[2] E. V. Brender, Soil Conservation Service, had major responsibility in the woodland phase of this study. Woodland data in this bulletin are based upon these findings which will be made available as a separate report, *Farm Woodlands in Greene County, Georgia* by E. V. Brender and C. R. Sayre.

ORGANIZATION AND INCOMES[1] OF REPRESENTATIVE FARMS

In an area where the physical limitations are similar, many farms are alike in organization and operation. This similarity is even closer for farms of the same general types and sizes. Three sizes of cotton and cotton-livestock farms have been analyzed (Table 7). The analysis is based upon representative farm organizations for each size-type group. These representative organizations are similar to more farms in their particular group than any other that could be outlined.

SMALL FARMS

Approximately 52 per cent of the farms in the county have 30 acres or less of cropland. The small farms are predominantly (83 per cent) cotton-type. Very few have livestock enterprises except for home use. The part-time, self-sufficing, and irregular farms fall largely within this size group.

SMALL COTTON FARMS. The cropland acreage for representative farms is about the same in both of the general soil areas. The total land area of the representative small farm in the redland sections is about 40 per cent greater than in the grayland section (Table 7). This reflects a difference in economic conditions. The decline in cotton prices, the reduction in cotton yields because of boll weevil infestation, and the progress of erosion have not affected farming operations so adversely in the grayland section during the past 25 years. Much land formerly cultivated in the redland sections is now in woods. In many instances what is now a representative small farm in the redland sections, was formerly cultivated by two families, probably as croppers under the plantation system.

Operators of small farms have about the same-sized businesses in the redland sections as in the grayland section. The size is very closely related to the acreage of cotton and corn that the family can cultivate with one mule and one-mule equipment. Grayland soils are more easily cultivated, but tend to "warm up" more slowly in the spring. This, together with the seasonable labor requirements for the chief crops, makes it difficult to cultivate a larger acreage than in the redland sections (Table 7). Crops consist of five acres of cotton plus feed crops for one mule, one cow, one fattening hog, and 20 chickens. The large acreage of feed crops needed for workstock would make it difficult to utilize an additional mule profitably with the present type of organization on the small farms. Larger acreages of crops that do not compete so directly with cotton and corn for labor are

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[1] Incomes are based on average prices paid and received in the period 1935-39.

TABLE 7. PRESENT ORGANIZATION AND FINANCIAL SUMMARY[1] OF REPRESENTATIVE FARMS FOR MAJOR SIZE AND TYPE OF FARMING GROUPS, FARMING SECTIONS, GREENE COUNTY, GEORGIA

ITEM	SMALL		MEDIUM-SIZED				LARGE				
	COTTON FARMS		COTTON FARMS		COTTON-LIVESTOCK FARMS		COTTON FARMS		LIVESTOCK FARMS[2]		
	GRAY-LAND SECTION	RED-LAND SECTIONS	GRAY-LAND SECTION	RED-LAND SECTIONS	GRAY-LAND SECTION	RED-LAND SECTIONS	GRAY-LAND SECTION	RED-LAND SECTIONS	COTTON DAIRY	DAIRY	COTTON-BEEF CATTLE
Land use	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*
Cropland used	22.0	23.0	39.0	40.0	50.0	54.0	109.0	69.0	133.0	56.0	135.0
Cropland idle	1.0		6.5	5.0		1.0	10.0	11.0			
Pasture	6.0	10.0	22.0	20.0	25.0	25.0	20.0	17.0	150.0	160.0	100.0
Woodland	30.0	49.0	50.0	92.0	60.0	147.0	137.0	119.0	262.0	150.0	350.0
Farmstead, waste, etc.	2.0	3.0	2.5	3.0	3.0	13.0	4.0	29.0	5.0	4.0	10.0
Total	61.0	85.0	120.0	160.0	138.0	240.0	280.0	245.0	550.0	370.0	595.0
Crops[3]											
Cotton	5.0	5.0	9.5	9.0	13.0	12.0	21.5	16.0	40.0	12.0	30.0
Corn alone	5.3	3.5	6.0	10.0		15.0		14.0	30.0		
Corn and cowpeas	5.7	6.0	4.5	4.5			20.0	15.0			20.0
Corn and velvet beans			6.5	3.5	20.0	15.0	20.0			32.0	30.0
Cane for feed					2.0				8.0	10.0	2.0
Wheat	2.5	2.5	4.0	4.0	2.0	3.0	9.0	7.0	10.0		8.0
Oats	1.5	2.0	2.5	4.0	6.0	4.5	8.5	7.5	18.0		5.0
Oats and vetch											10.0
Cowpeas	2.5	2.5	6.5	5.0	3.0	3.0	21.0	8.5			5.0
Native grass hay					2.0				25.0		20.0
Austrian peas							6.0				
Garden and patches	1.0	1.5	2.0	2.5	2.0	1.5	3.0	3.0	2.0	2.0	5.0
Livestock	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*
Workstock	1	1	2	2	2	2	4	3	5	4	5
Dairy cows	1	1	2	2	5	5	5	3	35	35	
Beef cows											20
Sows			1	1	2	2	1	1	2	2	2
Chickens	20	20	25	30	40	35	30	30	50	50	50
Value of farm property	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*
Land	601	599	1,335	1,085	1,530	1,500	3,395	1,675	4,399	3,042	6,625
Improvements	482	199	646	347	695	824	787	787	1,375	1,375	970
Machinery	44	40	64	53	64	53	164	134	271	222	185
Livestock	155	155	308	312	525	521	694	480	2,939	2,845	1,680
Total	1,282	993	2,353	1,797	2,814	2,898	5,040	3,076	8,984	7,484	9,460
Cash receipts											
Crops	136	116	245	205	296	246	736	392	732	261	619
Livestock	21	21	60	65	274	270	121	89	4,240	4,240	585
Woodland				15		23	22	20	40	24	55
AAA payments	39	37	74	64	87	79	205	113	245	85	203
Other	20	20	30	30	30	30	40	35	50	50	40
Total	216	194	409	379	687	648	1,124	649	5,307	4,660	1,502
Variable cash expenses											
Fertilizers	41	35	72	66	102	97	209	111	245	128	251
Other crop expenses	10	16	20	31	35	43	70	52	55	13	51
Livestock expenses	6	6	9	9	17	17	17	12	1,812	1,625	37
Hired labor					15	20	200	60	450	360	300
Machinery repair	5	5	15	16	15	15	49	39	99	83	50
Machinery hire									50	50	
Interest[4]	3	3	3	3	13	9	16	4	13		13
Total	65	65	119	125	197	201	561	278	2,724	2,259	702
Receipts less variable cash expenses	151	129	290	254	490	447	563	371	2,583	2,401	800
Overhead cash expenses											
Taxes[5]							40		106	75	86
Building and fence repairs	15	9	25	12	25	20	40	40	100	100	50
Total	15	9	25	12	25	20	80	40	206	175	136
Net cash return	136	120	265	242	465	427	483	331	2,377	2,226	664
Depreciation	38	27	51	44	53	51	116	100	168	144	139
Farm income	98	93	214	198	412	376	367	231	2,209	2,082	525
Interest on investment[6]	48	38	88	68	107	110	189	117	363	308	359
Family labor income	50	55	126	130	305	266	178	114	1,846	1,774	166
Value of family living from farm	250	235	345	335	345	335	345	335	500	500	450
Family labor earnings	300	290	471	465	650	601	523	449	2,346	2,274	616

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[1] Receipts, expenses, and incomes in this and other tables are based on prices shown in Appendix Table 4 unless otherwis stated. Labor used consists of family and/or hired labor.

[2] Because of the small number of large livestock farms, organizations were not outlined for each of the farming sections.

[3] Total acres of crops may exceed acres of cropland because of double cropping.

[4] Interest on borrowed operating capital.

[5] Georgia tax laws exempt real estate up to $2,000 assessed value for properties on which the owners live.

[6] Interest on machinery and livestock at 5 per cent and on real estate at 3.5 per cent.

needed to increase the feed supply for other types of livestock on these farms.

The available labor on the representative small farm consists mainly of the operator, his wife, and two children large enough to do light farm work. The acreage that a family can cultivate on small cotton farms is limited to their capacity in the peak labor periods (Figure 4). In other periods, the available laborers have very little to do. One of the important problems in the reorganization of small cotton farms is to find productive work during these slack times.

The total value of all farm property on the small farms is $1,282 in the grayland section and $993 in the redland sections. The limited amount and poor condition of machinery and fences are indicated by their low values. The machinery consists of a one-horse wagon and a few other one-horse implements adapted mainly to the production of row crops such as cotton and corn. Any immediate extensive changes in the system of farming are limited by this lack of equipment.

The gross cash income of $216 and $194 on the small farms in the grayland and redland sections, respectively, is derived mainly from cotton. AAA payments are the second most important source of cash. Livestock, though an important source of family living, provide very little cash income. The deduction of all cash expenses, depreciation on workstock, equipment, and buildings, and interest on investment from the gross cash income on these farms, leaves only about $50 in cash (family labor income) for the operator and his family (Table 7). Fertilizers account for more than half of the variable cash expenses. The rent paid for small tenant-operated cotton farms is usually $50 in cash or a bale of cotton.

In addition to cash income the family obtains food, fuel, and shelter valued at approximately $250. Despite the farm-furnished products, cash receipts of $50 per year are inadequate for family living expenses. How do these families live? Actually, they may not have repaid the loan obtained for the operation of the farm; normal charges of repair and depreciation may have been deferred indefinitely; or the full amount charged as interest may not have been a cash expense during the year. If the farms were owned without indebtedness on land or equipment, the entire amount charged as interest would be available for family living. Thus, if the operator sets aside nothing for depreciation or interest on investment, cash amounting to $136 in the grayland section and $120 in the redland sections would be available for cash living expenses on owner-operated farms. Under the same circumstances, considerably less cash would be available on tenant-operated farms, since rent charges cannot be deferred as easily or in the same manner as interest and depreciation charges.

MEDIUM-SIZED FARMS

Almost one-third of the farms in the county are medium-sized units. Eighty-five per cent of this group are cotton-type farms. Livestock, mainly cows for sour cream production, provide an important source of income on 12 per cent of the farms.

MEDIUM-SIZED COTTON FARMS. In both sections representative medium-sized cotton farms have 45 acres of cropland. The total farm area in the grayland section is 120 acres and in the redland sections 160 acres (Table 7). The acreages of pasture are about the same. Woodlands account for most of the difference in farm area.

Compared with the small cotton farms, medium-sized cotton farms have about twice the acreages in the various crops. They commonly have two mules, two sets of one-mule equipment, and a larger family labor force. The availability of the additional mule does not result in utilizing more labor-saving equipment. There is very little or no increase in the number of acres of crops per man on the larger units.

Available workers usually consist of the operator, his wife, one boy over 16, two boys under 16, and two girls. The labor distribution on medium-sized farms is essentially the same as on the small farms (Figure 5). Approximately 240 days of man labor are used on crops (Figure 7), although the family could work approximately 580 days if kept busy every day suitable for field work during the year.

Livestock are kept primarily for home use. Sales consist mainly of the few products that can be spared by the family. A brood sow or gilt is often maintained to raise the farm meat supply and provide a few pigs for sale.

Approximately one-half of the gross receipts is from cotton. In the redland sections a small income (averaging $15 per year) is obtained from the woodland. In the grayland section, yields are insufficient with present woodland practices for a cash income after farm needs for fuel, posts, and other woodland products are met.[1] Fertilizers account for more than one-half of the variable cash expenses. If no charge is made for depreciation and for interest on investment or rent, the cash available for family living is $265 in the grayland and $242 in the redland sections. In addition, the farm furnishes the family products valued at about $340.

MEDIUM-SIZED DAIRY FARMS. Medium-sized dairy farms are similar in many respects to the representative medium-sized cotton farm. The cropland acreage (50 acres on the grayland and 55 acres on redland farms) is larger than on the cotton-type farm. The difference is accounted for mainly by a larger acreage of cotton and corn (Table 7). A small acreage of native grass hay is harvested in the grayland section. The pasture acreage is larger than on the medium-sized cotton farm. In addition to livestock regularly kept on cotton farms they have a small herd of dairy cows. The cows supply dairy products for the family and sour cream for sale. Calves are usually sold as veals. With skim milk available, two brood sows are kept. Pigs not needed for home use are sold at weaning time.

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[1] Estimates of woodland receipts and expenses are obtained from an unpublished manuscript by E. V. Brender, Soil Conservation Service, and C. R. Sayre, Bureau of Agricultural Economics.

Cash receipts from the sale of cream, calves, and pigs exceed the receipts from cotton in the redland sections. The livestock enterprises which have been added with small extra costs in buildings, equipment, and operation, enable the farm operator to utilize pasture, additional feed, and family labor in securing a larger cash income. Even so, labor and land are poorly utilized with the present system.

LARGE FARMS

Of the large farm units more than two-thirds are in a cotton system and a little more than one-fourth are in a commercial livestock system—mainly dairy and beef production. The large cotton farms are divided into two groups on the basis of labor organization—those using wage labor and those using cropper labor.

LARGE COTTON FARMS USING WAGE LABOR. The representative large cotton farm in the grayland section has 109 acres in crops compared with 69 acres on the representative farm in the redland sections (Table 7). The cropping system is similar to those on small and medium-sized cotton farms. There is a considerably larger acreage of crops, but the size of the operator's family is about the same as on medium-sized farms. Ordinarily, one wage hand and additional workers hired seasonally are used on this group of farms in the grayland section. In the redland sections the hired labor is largely seasonal.

Interest, depreciation on the larger investment, and the wages tend to equalize family labor income for the medium-sized and the large cotton farms using wage labor (Table 7). Where the amount charged for interest on investment is available for family living, as on farms free of debt, the families on large farms have more cash available than do those on the small and medium-sized farms.

LARGE COTTON FARMS USING CROPPER LABOR. Cotton farms operated with cropper families are very similar in organization to large cotton farms using wage labor (Table 8). Cotton is the principal source of income. Corn and oats are the main feed crops.

These farms are most frequently operated with two cropper families, each of which has about the same number of workers as found on small cotton farms. The acreage of the various crops handled by each cropper family is slightly larger than that

TABLE 8. ORGANIZATION AND FINANCIAL SUMMARY, REPRESENTATIVE LARGE COTTON FARM USING CROPPER LABOR, REDLAND SECTIONS, GREENE COUNTY, GEORGIA[1]

ITEM	TOTAL FOR FARM	OPERATOR'S SHARE	CROPPERS' SHARE[2]
	acres	*acres*	*acres*
Land use			
Cropland	75	28	47
Pasture	15	15	
Woodland	139	139	
Farmstead, waste, etc.	26	25	1
Total	255	207	48
Crops			
Cotton	21	9	12
Corn	30	6	24
Small grains	14	8	6
Cowpeas	6	3	3
Garden and patches	4	2	2
Livestock	*number*	*number*	*number*
Workstock	3	3	
Cows	4	2	2
Fattening hogs	4	2	2
Chickens	60	30	30
Value of farm property	*dollars*	*dollars*	*dollars*
Real estate	2,064	2,064	
Machinery	134	134	
Livestock	509	395	114
Total	2,707	2,593	114
Cash receipts	749	490	259
Variable cash expenses	311	238	73
Receipts less variable cash expenses	438	252	186
Overhead cash expenses	40	40	
Net cash return	398	212	186
Depreciation	100	100	
Farm income	298	112	186
Interest on investment	104	98	6
Family labor income	194	14	180
Value of family living from farm	815	345	470
Family labor earnings	1,009	359	650

[1] A farm organization for large cotton farms using cropper labor has not been outlined for the grayland section because of the small number of such farms in that section.

[2] This represents the combined operations of two cropper families.

on small cotton farms. Operator families on these units work an acreage slightly larger than that worked by each cropper.

The net cash return to the two cropper families on the representative farm is $93 each, compared with $212 to the operator family. The operator's income must cover a depreciation charge of $100 if improvements and equipment are maintained. If no interest is paid on investment, $112 is left for living expenses. If allowance is made for interest on investment, the net return to the operator family is only $14. The net cash return of $93 per cropper family is very similar to the income of $98 and $93 on the small owner-operated cotton farms in the grayland and redland sections respectively. In other words, the owner-operator of the small farm receives no larger cash income as a result of his investment in land, buildings, equipment, and workstock than the cropper family with very little investment.

The cost of cropper labor to the operator is the value of the share of the crop received by the cropper, AAA payments which might otherwise have been earned by the operator, and the value of perquisites furnished the cropper minus the crop expenses paid by the cropper. On this basis the cost of cropper labor is approximately $1.25 per day. Exclusive of perquisites, consisting of buildings, pasture, garden, and fuel wood, the cost of cropper labor is approximately $0.85 per day. However, the cropper shares the risk of crop failure.

LARGE DAIRY FARMS. Because of the variation in the size of the crop enterprises, dairy farms are separated into two groups, cotton-dairy farms and specialized dairy farms. The cotton-dairy farm has a large cropland acreage, much of which is devoted to cotton (Table 7). Small grains and native grass hay, important feed crops on the cotton-dairy farm, are not grown on the strictly dairy farm. The number and kind of livestock in each of these representative organizations are about the same. The dairy herd consists of about 35 cows, one bull, and sufficient young cattle to permit some choice in selecting replacements.

Milk is the principal source of cash receipts. The largest expense item is for purchased feeds, despite higher yields on both types of dairy farms than for other major size-type groups of farms. The cash return to the operator and his family after the deduction of all cash expenses, depreciation, and interest on investment, amounts to $1,846 on the cotton-dairy farms and $1,774 on the dairy farm, an income several times larger than that obtained on the representative farm of any other size-type group.

LARGE BEEF-CATTLE FARMS. The representative beef-cattle farm has about 135 acres in cropland and 100 acres in pasture (Table 7). Most of the latter is unimproved. The beef enterprise is organized on a breeding herd basis with about 20 cows and 15 young cattle. Here, as on the large dairy farms, cotton occupies an important place in the cropping system. A small acreage of oats and vetch mixed for hay, a crop not widely grown in the county, is a good source of feed on these farms. Native grass hay also provides a large part of the roughage.

The gross cash receipts from livestock are only slightly below the receipts from crops. Fertilizers and wage labor are the major expense items. After all cash expenses of operating the farm are met and a charge for depreciation is made, a farm income of $525 remains. With the large investment, this income less interest amounts to only $166.

REORGANIZATION OF REPRESENTATIVE FARMS WITH PRESENT ACREAGES[1]

With present organization and production practices in Greene County, the incomes from many of the major size-type groups of farms are too low to provide adequately for farm family needs; furthermore, the predominant system of farming contributes to serious erosion damage. These conditions are not inevitable. Adjustments in the farm organization could be made which would lead to higher income and better farming.

SMALL FARMS

ORGANIZATION. Sufficient land of fairly good quality is available on most small farms to provide additional cropland, allowing for the retirement of some land now in crops (Table 9). Alternative organizations I through VIII each has 24 acres in crops. Pasture acreage is unchanged in the alternative organization for the redland farm and is increased by one acre for the grayland farm.

In outlining the alternative organizations, an attempt has been made to combine crops in proportions that would simplify rotations. Some crop sequences that might be used are as follows:

(1) First year—cotton[2]
Second year—small grains followed by lespedeza and lespedeza followed by winter legumes
Third year—corn interplanted with velvet beans

(2) First year—cotton
Second year—small grains followed by lespedeza
Third year—small grains followed by lespedeza and lespedeza followed by winter legumes
Fourth year—corn interplanted with velvet beans

(3) First year—cotton
Second year—small grains followed by lespedeza
Third year—small grains followed by lespedeza and lespedeza followed by winter legumes
Fourth year—corn interplanted with velvet beans
Fifth year—corn interplanted with velvet beans

In each of the alternative organizations the number of hogs and poultry is the same as for the existing organization because of the limited quantities of grain grown. The number of beef cattle or of dairy cattle kept for sour cream production is adjusted to the number needed to utilize the hay and other roughages raised. Concentrate feeds are purchased where they are needed to provide the usual proportions between concentrates and roughages with present feeding practices.

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[1] Incomes in the alternative organizations are based upon usual prices paid and received by farmers in the period 1935-39 (Appendix Table 4).

[2] Pimiento peppers or corn interplanted with cowpeas may be substituted for cotton in these rotations, without disrupting the rest of the crop sequence.

In alternative I in the grayland section, the cotton enterprise is reduced from five to three acres; corn interplanted with cowpeas is reduced to one acre; and eight acres of corn and velvet beans are included (Table 9). Other changes in rotation crops are an increase of four acres in oats, the addition of eight acres of lespedeza, and the addition of five acres of crimson clover and rye grass. Three acres of kudzu for hay are included.

With these feed crops seven beef cows are added. These would require an addition of a small cattle shed, some fencing, and a $186 larger investment in livestock. The latter addition need not be a cash outlay. The estimated net cash return from this organization is $160. This is $24 more than the income from the present small cotton organization. The beef-cattle enterprise would little more than offset the effect of reducing the cotton acreage. On many farms these changes would have to be adopted gradually.

In alternative II, changes in crops are similar to those in alternative I, except that the cotton acreage is not reduced and a smaller acreage of corn is grown. Beef cattle are added as in alternative I (Table 9). The estimated net return is $172, appreciably greater than the income from the present organization or from alternative I.

In alternative III cotton is increased to eight acres. Beef cattle are added to the limit of the feed supply. The estimated net cash return from this organization is $193. Both alternatives II and III demonstrate the fundamental importance of the cotton enterprises on these farms. In view of the outlook for cotton during the next few years, however, it might be impractical for farmers to plan to increase their cotton acreage beyond that shown for alternative II.

In alternative IV, the cotton acreage is maintained as at present, and a few dairy cows are added to consume available roughages (Table 9). Dairying would require more labor and a small increase in investment for equipment. The estimated net cash return from the organization is $202, a larger income than from any other alternative organization analyzed.

In alternative V, the cotton acreage is reduced and pimiento peppers and beef cattle are added. The probable return from this organization compares favorably with that of other organizations with beef cattle. But any expansion in the production of pimiento peppers depends upon the development of markets for the crop.

TABLE 9. ORGANIZATION AND FINANCIAL SUMMARY[1] OF ALTERNATIVE ORGANIZATIONS OF THE REPRESENTATIVE SMALL COTTON FARM, GREENE COUNTY, GEORGIA

ITEM	GRAYLAND SECTION					REDLAND SECTIONS		
	I	II	III	IV	V	VI	VII	VIII
	acres	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*
Land use								
Cropland	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Pasture	7.0	7.0	7.0	7.0	7.0	10.0	10.0	10.0
Woodland	28.0	28.0	28.0	28.0	28.0	48.0	48.0	48.0
Farmstead	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0
Total	61.0	61.0	61.0	61.0	61.0	85.0	85.0	85.0
Crops								
Cotton	3.0	5.0	8.0	5.0	2.0	5.0	5.0	5.0
Peppers					2.0		2.0	2.0
Corn and cowpeas	1.0							
Corn and velvet beans	8.0	7.0	4.0	7.0	8.0	7.0	3.0	3.0
Wheat	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Oats	5.5	5.5	5.5	5.5	5.5	5.5	7.5	7.5
Lespedeza for hay	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(5.0)	(5.0)
Lespedeza for green manure	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(4.0)	(5.0)	(5.0)
Crimson clover and rye grass	(5.0)	(5.0)	(5.0)	(5.0)	(5.0)	(5.0)	(5.0)	(5.0)
Kudzu	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Garden and patches	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Livestock	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*
Workstock	1	1	1	1	1	1	1	1
Milk cows				4				4
Beef cows	7	6	6		6	6	6	
Fattening hogs	1	1	1	1	1	1	1	1
Chickens	20	20	20	20	20	20	20	20
Value of farm property	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*
Land	610	610	610	610	610	810	810	810
Improvements	562	562	562	562	562	358	358	358
Machinery	44	44	44	64	44	40	40	60
Livestock	341	310	310	260	310	310	310	260
Total	1,557	1,526	1,526	1,496	1,526	1,518	1,518	1,488
Cash receipts								
Crops	65	103	161	103	117	95	171	171
Livestock	143	121	122	145	121	122	122	146
Woodland products	11	11	11	11	11	22	22	22
AAA payments	51	51	51	51	51	48	48	48
Other	20	20	20	20	20	20	20	20
Total	290	306	365	330	320	307	383	407
Variable cash expenses								
Fertilizers	50	54	61	54	58	60	70	70
Other crop expenses	32	34	37	34	40	39	52	52
Livestock expenses	19	17	45	11	17	22	45	39
Woodland expenses	1	1	1	1	1	2	2	2
Machinery repair	5	5	5	5	5	5	5	5
Interest	3	3	3	3	3	3	3	3
Total	110	114	152	108	124	131	177	171
Receipts less variable cash expenses	180	192	213	222	196	176	206	236
Overhead cash expenses								
Taxes								
Building and fence repairs	20	20	20	20	20	15	15	15
Total	20	20	20	20	20	15	15	15
Net cash return	160	172	193	202	176	161	191	221
Depreciation	44	44	44	44	44	35	35	35
Farm income	116	128	149	158	132	126	156	186
Interest on investment	60	59	59	57	59	58	58	57
Family labor income	56	69	90	101	73	68	98	129
Value of family living from farm	250	250	250	250	250	235	235	235
Family labor earnings	306	319	340	351	323	303	333	364

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[1] Based on average prices paid and received in the period 1935–39.

Alternatives VI, VII, and VIII for the representative farms in the redland sections all include the present cotton acreage. In alternative VI corn with velvet beans, oats, lespedeza, and crimson clover with rye grass are added to the organization. Corn grown alone and corn interplanted with cowpeas are dropped. A small beef-breeding herd of six cows is added. The estimated net cash return from this organization is $161, an increase of $41 over the return from the present organization of the representative farm. Alternative VII includes two acres of pimientos and a beef-breeding herd. The cash return estimated for this organization is $191. Alternative VIII includes pimientos and a dairy enterprise for producing sour cream for sale, as outlined in alternative IV. The estimated net cash return is $221. As for alternative IV, such an organization would depend largely upon the attitude of the farm operator, his ability in handling dairy cows, and the market for pimientos.

The woodland acreages on the alternative farms are 28 acres and 48 acres for the grayland and redland sections respectively. With present management practices, this woodland is contributing little more than fuel, posts, and lumber for use on the farm. With improved woodland management, a net cash return averaging $11 annually could be obtained during the next ten years on the small farm in the grayland section and $22 in the redland sections.

LABOR. The amount of labor used on both alternative organizations I and II is lower than on the representative farm in the spring and during the early summer peaks (Figure 4). This results from the decrease in corn acreage and the displacement of cowpeas. Some reduction in labor could be effected in the latter part of August and in September by discontinuing the practice of pulling fodder. In the fall, the amount of labor used is considerably less than that available. The alternative organizations provide more profitable work during this period.

INCOMES WITH VARYING PRICES. The relative profitableness of the alternative organizations summarized in Table 9 varies, of course, with changes in price relationships. In Table 10 cash returns above variable cash expenses, with prices for cotton, beef cattle, and fertilizer varying and with other prices held constant, are shown for alternative organizations I, II, and III. These organizations have three, five, and eight acres of cotton respectively. The varying prices for cotton, 6, 10, and 14 cents per pound, represent the range in prices from 1933 to 1939. The varying beef cattle prices are 3 cents, 4.43 cents (the average of prices received by Georgia farmers during 1935-39), 6 cents, and 8 cents. Beef cattle prices frequently vary with the grade of cattle within the same year as much as the variations from one year to another. It would be possible for farmers to obtain higher than average prices by using good beef-type bulls and by

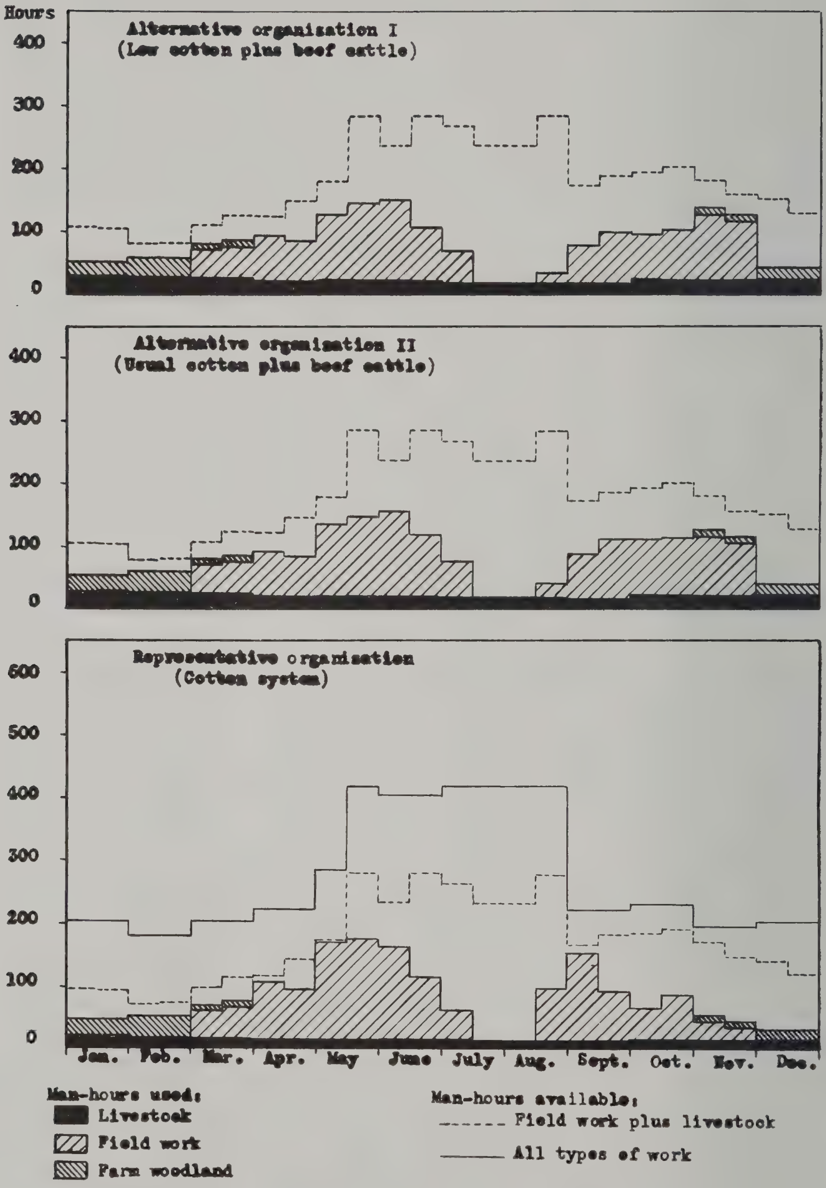

FIG. 4. *Family labor available compared with labor used for farm woodlands and other enterprises on cotton systems and other alternative organizations, representative small farm, grayland section, Greene County, Georgia.*

TABLE 10. COMPARISON OF CASH RETURNS[1] FROM ALTERNATIVE ORGANIZATIONS OF REPRESENTATIVE SMALL FARM WITH VARYING PRICES OF COTTON, BEEF CATTLE, AND FERTILIZERS, ASSUMING ALL OTHER FACTORS CONSTANT[2]

PRICE OF COTTON LINT PER POUND AND OF COTTON SEED PER TON	FARM ORGANIZATION[3]	CASH RECEIPTS LESS VARIABLE CASH EXPENSES UNDER SITUATIONS INDICATED											
		FERTILIZERS AT PRICES 20 PER CENT LOWER THAN USUAL				FERTILIZERS AT USUAL PRICES[4]				FERTILIZERS AT PRICES 20 PER CENT HIGHER THAN USUAL			
		PRICE OF BEEF CATTLE PER POUND OF LIVE WEIGHT				PRICE OF BEEF CATTLE PER POUND OF LIVE WEIGHT				PRICE OF BEEF CATTLE PER POUND OF LIVE WEIGHT			
		3.00 CENTS	4.43 CENTS	6.00 CENTS	8.00 CENTS	3.00 CENTS	4.43 CENTS	6.00 CENTS	8.00 CENTS	3.00 CENTS	4.43 CENTS	6.00 CENTS	8.00 CENTS
		dol.	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*
Lint, 6 cents Seed, $16	I	74	116	162	220	64	106	152	210	54	96	142	200
	II	78	112	151	199	67	101	140	188	56	90	129	177
	III	77	112	150	198	65	100	138	186	53	88	126	174
Lint, 10 cents Seed, $26	I	97	139	185	243	87	129	175	233	77	119	165	223
	II	118	152	191	239	107	141	180	228	96	130	169	217
	III	139	174	204	260	127	162	200	248	115	150	188	236
Lint, 14 cents Seed, $36	I	121	163	209	267	111	153	199	257	101	143	189	247
	II	156	190	229	277	145	179	218	266	134	168	207	255
	III	201	236	274	322	189	224	262	310	177	212	250	298

[1] Cash receipts (except AAA payments) less variable cash expenses.

[2] The return figures are based on data from the grayland section.

[3] Summaries of the farm organizations compared are shown in Table 9. Number I includes low cotton acreage with beef cattle added; II includes usual cotton acreage with beef cattle added; and III includes high cotton acreage with beef cattle added.

[4] Average prices paid in the period 1935–39.

gradually improving the quality of their beef herd. The varying prices used for fertilizers are the average prices for 1935-39, prices 20 per cent lower than this average, and prices 20 per cent higher than this average. In some cases fertilizer costs might be reduced by home mixing.

With cotton at six cents per pound, the organization with the smallest acreage of cotton has the largest income, unless beef cattle prices are also low, or unless fertilizer prices are as low or lower than in the 1935-39 period. With cotton at either 10 or 14 cents and fertilizers and beef cattle at usual prices, income increases as the acreage in cotton increases.

CONSERVATION PHASES OF REORGANIZATION. Except for costs incurred in land use changes and in pasture maintenance incidental to reorganization, the only conservation costs included in determining incomes under alternative organizations are those for practices that are in common use. The level of conservation generally followed in the past, however, is inadequate. Erosion has progressed to the point where many fields have become unsuited for cultivation or have been abandoned because of low productivity. If size and productivity of farms are to be maintained, additional practices involving some additional expenditures of cash, materials, and labor, are needed. Soil conservation

TABLE 11. LAND USE AND CROPS BEFORE AND AFTER ADOPTION OF SOIL CONSERVATION PLAN ON A SELECTED SMALL FARM, GREENE COUNTY, GEORGIA[1]

ITEM	GRAYLAND SECTION		REDLAND SECTIONS	
	BEFORE CHANGE	AFTER CHANGE	BEFORE CHANGE	AFTER CHANGE
	acres	*acres*	*acres*	*acres*
Land use				
Cropland used	23.0	38.0	18.0	26.0
Cropland idle	15.0		8.0	
Pasture	6.0	6.0	4.0	8.0
Woodland	30.0	30.0	56.0	52.0
Farmstead and waste	1.0	1.0	1.0	1.0
Total	75.0	75.0	87.0	87.0
Crops				
Cotton	6.0	6.0	5.0	5.0
Corn	10.0	8.0	10.5	9.0
Small grains	6.0	15.0	2.0	7.0
Cowpeas	6.0			
Lespedeza		15.0		7.0
Crimson clover		9.0		10.0
Kudzu		4.0		2.0
Lespedeza sericea		2.0		1.0
Garden and patches	1.0	2.0	0.5	1.0

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[1] Data furnished by Soil Conservation Service.

plans, developed jointly by farmers and Soil Conservation Service technicians, have been analyzed to obtain approximations of the kind and extent of conservation practices needed and to provide a basis for estimating their cash costs.

The land use changes recommended on the selected farms from the standpoint of conservation are shown in Table 11. If the conservation plans were established on these farms, the land use pattern would be similar in many respects to that outlined in the alternative organizations. The needs for mechanical erosion control measures are also approximately the same. Hence the costs of conservation on the selected farms are indicative of costs involved in the transition from the present to the alternative organization. Many of the conservation costs are expenditures which, once made, will not need to be repeated, except at infrequent intervals (Table 12). Some practices, such as the establishment of kudzu, will last a relatively long period of time if properly maintained. Others, such as the seeding of annual lespedeza or crimson clover, need to be done more often. In the grayland section the total cash costs on the selected small farm amount to a total of $160. In the redland sections, they amount to $152.

On these particular farms the costs can be met because of the availability of funds from non-farm sources, including credit. On many of the small farms, however, the cash costs would have to be paid from the annual farm income. Present incomes cannot provide sufficient funds for paying a very large part of these costs. How can farmers entirely dependent on current incomes carry on an adequate conservation program? Three approaches are suggested. The first of these is to reduce the cash costs. In the plan outlined in Table 12 one of the largest costs is for terracing, amounting to $1.50 per acre. It is assumed the terrace lines would be laid out free of charge. Most farmers could construct their terraces with the labor and power already on the farm if they could obtain a drag pan costing about $6. This would save $51, less the price of the drag pan, on the grayland farms. Another fairly large cost in the establishment of these plans is for seeding pastures. The pasture plans call for a mixture of ten pounds of lespedeza, three pounds of Dallis grass, and three pounds of white dutch clover per acre, all of which have to be purchased. Research data indicate, however, that very good results may be obtained on upland pasture from a combination of only white dutch clover and bermuda grass.[1] Bermuda can be established with little or no cash outlay; thus the seed cost could be reduced to the price of the white dutch clover. Later, if the farm operator desired to use annual lespedeza in his pasture, he could harvest the seed from that grown for soil-building purposes.

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[1] Bledsoe, R. P., and Sell, O. E., *Permanent Pastures*, Bulletin 207, Georgia Experiment Station, Experiment, Georgia, September 1940.

TABLE 12. CONSERVATION PRACTICES NEEDED AND THE CASH COSTS OF THEIR ESTABLISHMENT ON A SELECTED SMALL FARM, GREENE COUNTY, GEORGIA[1]

PRACTICES	UNIT OF WORK	TOTAL UNITS NEEDED	FIRST YEAR		SECOND YEAR		THIRD YEAR		TOTAL CASH COSTS
			UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	
		number	*number*	*dollars*	*number*	*dollars*	*number*	*dollars*	*dollars*
GRAYLAND SECTION									
Terracing	acre	34.0			34.0	51.00			51.00
Establish crimson clover									
Seed	acre	9.0	1.0	2.50	6.0		9.0		2.50
Establish lespedeza									
Seed	acre	15.0	2.0	2.40	10.0		15.0		2.40
Establish kudzu									
Crowns	acre	4.0	2.0				2.0		
Fertilizers	acre		2.0	6.80			2.0	6.80	13.60
Establish lespedeza sericea									
Seed	acre	2.0	1.0	3.60			1.0		3.60
Fertilizers	acre	2.0	1.0	3.20			1.0	3.20	6.40
Pasture improvement									
Additional fence	rod	180.0	180.0	21.60					21.60
Seed	acre	6.0	3.0	10.35	3.0	10.35			20.70
Fertilizers	acre	6.0	3.0	19.20	3.0	19.20			38.40
Total costs				69.65		80.55		10.00	160.20
REDLAND SECTIONS									
Terracing	acre	23.0	23.0	34.50					34.50
Establish crimson clover									
Seed	acre	10.0	1.0	2.00	5.0		10.0		2.00
Establish lespedeza									
Seed	acre	7.0	2.0	2.40	7.0		7.0		2.40
Establish kudzu									
Crowns	acre	2.0	2.0						
Fertilizers	acre	2.0	2.0	4.80					4.80
Establish lespedeza sericea									
Seed	acre	1.0	1.0	3.60					3.60
Fertilizers	acre	1.0	1.0	2.40					2.40
Pasture improvement									
Additional fence	rod	200.0	200.0	24.00					24.00
Seed	acre	8.0	4.0	13.80	4.0	13.80			27.60
Fertilizers	acre	8.0	4.0	25.60	4.0	25.60			51.20
Total costs				113.10		39.40			152.50

[1] Data on practices furnished by Soil Conservation Service

The second way in which the cost might be met would be to spread the work over a longer period, reducing the cost in each year to a minimum. On many farms this might be desirable, even though the operator is able to bring about reductions in total cash costs as indicated above. Family labor is an unutilized productive resource available in large quantities. There are idle days in late summer, fall, and winter with the present farm organizations (Figure 6). This free time would be reduced by the adoption of the alternative organizations but it would still exist in large quantities. Family members on these small farms could use this time to carry on a conservation and woodland-improvement program, thereby developing the land base needed for improving their income status and contributing to future rural welfare.

The third method is for operators to increase incomes as expenses are increased. In 1938 the representative small cotton farm in the grayland section failed by approximately $12 to earn the maximum payment for soil-building practices under the AAA program. In five years' time $12 annually would be enough to pay the larger part of the cash cost of the conservation program on this farm if there were no cash outlay for terracing. With the conservation plan made for this farm, the increase in payments could be earned each year, even though the conservation program were modified to be completed in five rather than in three years. Where cash is not immediately available to pay costs of these practices, the AAA program provides, where practicable, that "limestone, superphosphate, trees, seeds, and other materials, upon request of the producer, may be furnished by the AAA, to be used in carrying out approved soil-building practices which shall be counted toward meeting the soil-building goal for the farm. If such materials are furnished, a deduction from the payment for the farm shall be made in the amount of the approximate average cost of such materials to the AAA."[1]

MEDIUM-SIZED FARMS

ORGANIZATIONS. Four alternative organizations, each having 45 acres of cropland, have been set up for the representative medium-sized cotton farms in the grayland section and one in the redland sections (Table 13). As on the small farms, the cropland not in cotton is in feed and food crops. Two of the alternative organizations in the grayland section have 10 acres of cotton, compared with 9.5 on the representative farm as now organized. One has a smaller acreage and the other a larger acreage of cotton than the representative organization. The alternative in the redland sections has the same acreage of cotton as the representative farm. Improved pasture occupies 22 acres of

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[1] *Georgia Handbook,* 1940 *Agricultural Conservation Program,* p. 21, U. S. Dept. of Agriculture, Agricultural Adjustment Administration, January, 1940.

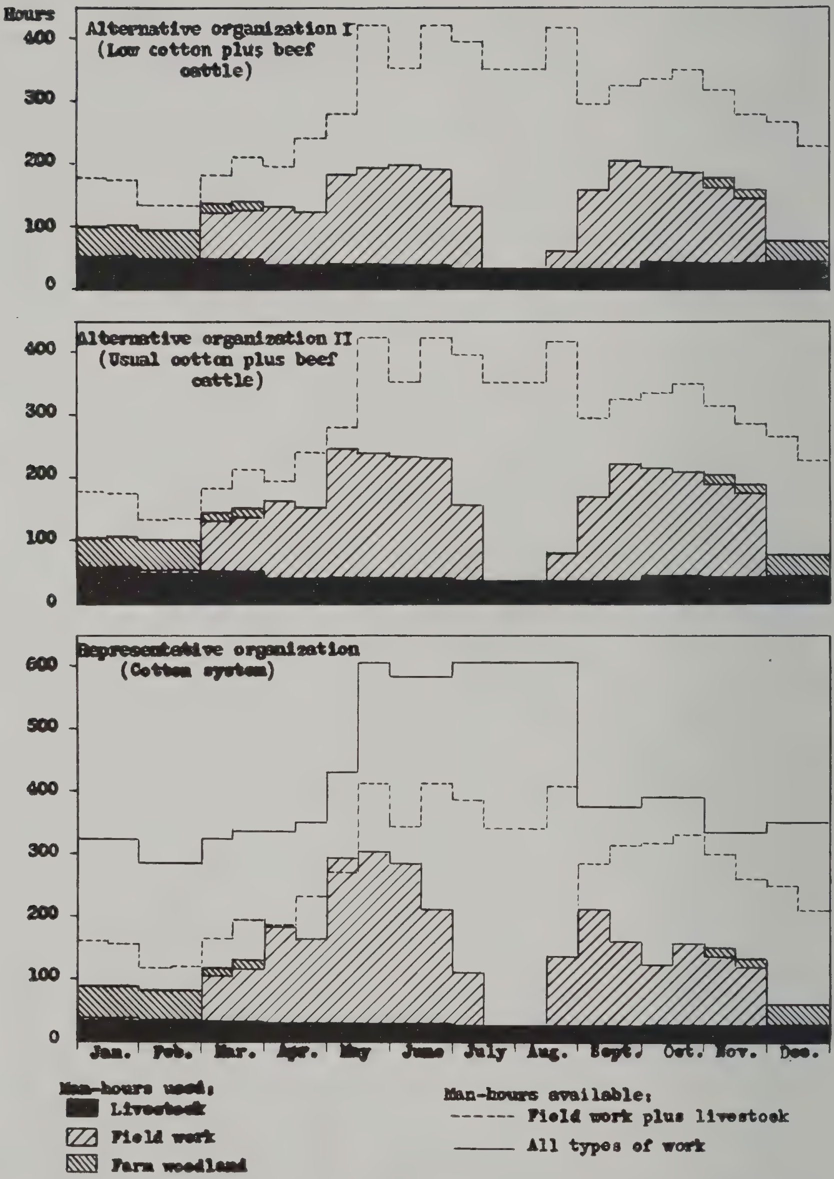

FIG. 5. *Family labor available compared with labor used for farm woodlands and other enterprises on cotton system and other alternative organizations, medium-sized representative cotton farm, grayland section, Greene County, Georgia.*

land on the grayland farms and 20 acres on the redland farm. Increased feed would be used for beef cattle in four of the alternative organizations and for dairy cattle on one. Cattle numbers would be adjusted to the amount of roughages available with usual yields and feeding rates.

LABOR. The distribution of man labor on two of the alternative organizations is compared in Figure 5 with the amount used and with labor available on the representative setup. On the alternative organizations, oats are harvested with a binder rather than with hand equipment as on the representative farm. Further reduction in labor is attained by discontinuing the practice of pulling fodder.

PRESENT INCOMES. If AAA payments are held constant, cash return above variable cash expenses with average prices for 1935-39 increases as the acres in cotton increase. The receipts less variable cash expenses on farms in the grayland section keeping beef cattle are $340 when only 5 acres of cotton are grown, $416 when 10 acres of cotton are grown, and $450 when 15 acres of cotton are grown. Returns from dairy cattle kept for sour cream production are larger than those from beef cattle.

INCOMES UNDER VARYING YIELDS AND PRICES. In Table 14, cash returns in the grayland section are compared for three organizations having different acreages of cotton with varying yield levels, and with varying prices of cotton, beef cattle, and fertilizers. The varying yields of cotton lint are 150 pounds, 195 pounds (usual yield), and 250 pounds per acre. The yields of other crops are in approximately the same ratio to their usual yields. When cotton is selling for 6 cents per pound and either low or usual yields are obtained, income is higher on the farm having the usual acreage of cotton (10 acres) than on the farm having a low acreage (5 acres) or on the farm having a high cotton acreage (15 acres). When cotton is selling for either 10 or 14 cents per pound, incomes increase as the acres in cotton increase, regardless of variations in yields and prices within the limits used.

MEDIUM-SIZED COTTON-DAIRY FARM: ITS REORGANIZATION AND SIMILARITY TO ALTERNATIVE ORGANIZATIONS OF MEDIUM-SIZED COTTON FARMS. The alternative organizations outlined for the medium-sized cotton farms (Table 13) are comparable in some respects to the present organization of medium-sized cotton-dairy farms in the county (Table 7). The representative grayland farm in the latter group has a slightly larger acreage of cropland and a larger acreage of cotton than alternatives I and II for the cotton farm. With shifts in crops similar to those outlined for alternative organizations of the representative medium-sized cotton farm, receipts less variable cash expenses on the cotton-livestock farm could be increased from $490 to $782 in the grayland section and from $447 to $879 in the redland sections (Table 13).

TABLE 13. ORGANIZATION AND FINANCIAL SUMMARY OF ALTERNATIVE ORGANIZATIONS OF REPRESENTATIVE MEDIUM-SIZED FARMS, GREENE COUNTY, GEORGIA

ITEM	COTTON FARM					COTTON-LIVESTOCK FARM	
	GRAYLAND SECTION				RED-LAND SECTIONS	GRAYLAND SECTION	RED-LAND SECTIONS
	I	II	III	IV	V		
Land use	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*
Cropland	45	45	45	45	45	50	55
Pasture	22	22	22	22	20	25	25
Woodland	50	50	50	50	92	60	157
Farmstead	3	3	3	3	3	3	3
Total	120	120	120	120	160	138	240
Crops							
Cotton	5	10	15	10	9	13	12
Corn and cowpeas	3				3		4
Corn and velvet beans	8	11	6	11	12	11	8
Wheat	4	4	4	4	4	4	4
Oats	15	10	10	10	8	10	12
Lespedeza for hay	(9)	(7)	(7)	(7)	(6)	(7)	(8)
Lespedeza for green manure	(10)	(7)	(7)	(7)	(6)	(7)	(8)
Crimson clover and rye grass	(7)	(7)	(7)	(7)	(6)	(7)	(8)
Kudzu	8	8	8	8	7	10	13
Garden and patches	2	2	2	2	2	2	2
Livestock	*number*	*number*	*number*	*number*	*number*	*number*	*number*
Woodstock	2	2	2	2	2	2	2
Dairy cows				9		11	12
Beef cows	12	12	12		10		
Sows	1	1	1	1	1	2	2
Chickens	25	25	25	25	30	40	35
Value of farm property	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*
Land	1,455	1,455	1,455	1,455	1,300	1,740	1,720
Improvements	755	755	755	755	492	770	884
Machinery	202	202	202	222	191	206	195
Livestock	618	618	618	553	560	655	686
Total	3,030	3,030	3,030	2,985	2,543	3,371	3,485
Cash receipts							
Crops	111	207	302	207	172	266	238
Livestock	268	268	268	390	223	552	602
Woodland	42	42	42	42	125	50	220
AAA payments	84	84	84	84	76	112	104
Other	30	30	30	30	30	30	30
Total	535	631	726	753	626	1,010	1,194
Variable cash expenses							
Fertilizer	100	113	124	113	119	129	129
Other crop expenses	31	35	41	35	41	45	64
Livestock expenses	33	35	79	24	29	20	58
Woodland expenses	7	7	7	7	15	10	40
Machinery repair	22	22	22	22	23	22	22
Interest	2	3	3	2	3	2	2
Total	195	215	276	203	230	228	315
Receipts less variable cash expenses	340	416	450	550	396	782	879
Overhead cash expenses							
Taxes[1]							
Building and fence repairs	30	30	30	30	20	30	25
Total	30	30	30	30	20	30	25
Net cash return	310	386	420	520	376	752	854
Depreciation	60	60	60	60	55	60	60
Farm income	250	326	360	460	321	692	794
Interest on investment	118	118	118	116	100	131	135
Family labor income	132	208	242	344	221	561	659
Value of family living from farm	345	345	345	345	335	345	335
Family labor earnings	477	553	587	689	556	906	994

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[1] Taxes are exempted under Georgia homestead tax exemption laws.

TABLE 14. COMPARISON OF CASH RETURNS[1] FROM ALTERNATIVE ORGANIZATIONS OF REPRESENTATIVE MEDIUM-SIZED FARM WITH VARYING YIELD LEVELS AND WITH VARYING PRICES OF COTTON, BEEF CATTLE, AND FERTILIZERS, ASSUMING ALL OTHER FACTORS CONSTANT[2]

Price of cotton lint per pound and of cotton seed per ton	Crop yield[3]	Farm organization[4]	Cash receipts less variable cash expenses under situations indicated								
			Fertilizers at prices 20 per cent lower than usual			Fertilizers at usual prices[5]			Fertilizers at prices 20 per cent higher than usual		
			Price of beef cattle per pound of live weight			Price of beef cattle per pound of live weight			Price of beef cattle per pound of live weight		
			3.00 cents	4.43 cents	8.00 cents	3.00 cents	4.43 cents	8.00 cents	3.00 cents	4.43 cents	8.00 cents
			dol.	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*	*dol.*
Lint, 6 cents Seed, $16	Low yields	I	85	140	276	65	120	256	45	100	236
		II	103	158	294	80	135	271	57	112	248
		III	96	151	287	71	126	262	46	101	237
	Usual yields	I	164	236	415	144	216	395	124	196	375
		II	205	277	456	182	254	433	159	231	410
		III	203	275	454	178	250	429	153	225	404
	High yields	I	251	364	644	231	344	624	211	324	604
		II	297	400	655	274	377	632	251	354	609
		III	334	430	668	309	405	643	284	380	618
Lint, 10 cents Seed, $26	Low yields	I	115	170	306	95	150	286	75	130	266
		II	163	218	354	140	195	331	117	172	308
		III	186	241	377	161	216	352	136	191	327
	Usual yields	I	204	276	455	184	256	435	164	236	415
		II	283	355	534	260	332	511	237	309	488
		III	319	391	570	294	366	545	269	341	520
	High yields	I	301	414	694	281	394	674	261	374	654
		II	397	500	755	374	477	732	351	454	709
		III	484	580	818	459	555	793	434	530	768
Lint, 14 cents Seed, $36	Low yields	I	145	220	336	125	180	316	105	160	296
		II	223	278	414	200	255	391	177	232	368
		III	276	331	467	251	306	442	226	281	417
	Usual yields	I	242	314	493	222	294	473	202	274	453
		II	361	433	612	338	410	589	315	387	566
		III	437	509	688	412	484	663	387	459	638
	High yields	I	351	464	744	331	444	724	311	424	704
		II	497	600	855	474	577	832	451	554	809
		III	634	730	968	609	705	943	584	680	918

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[1] Cash receipts (except AAA payments) less variable cash expenses.

[2] The return figures are based on data from the grayland section.

[3] The yields of cotton lint per acre are 150 pounds, 195 pounds, and 250 pounds, respectively, for the low, usual, and high yield levels. The yield of other crops at the low and high yield levels are approximately in the same ratio to the usual yields of these crops as are the low yield and high yield of cotton to the usual cotton yield.

[4] Summaries of the farm organizations compared are shown in Table 13. Number I includes low cotton acreage with beef cattle added; II includes usual cotton acreage with beef cattle added; and III includes high cotton acreage with beef cattle added.

[5] Average prices paid in the period 1935–39.

CONSERVATION PHASES OF REORGANIZATION. The costs of adopting a conservation program on these farms are indicative of costs involved in the shift from the present to the alternative organizations (Tables 13 and 15). The total cash costs are $326 on the farms in the grayland section and $303 in the redland sections (Table 16). Modifications similar to those suggested for the small farms may be needed before these plans can be applied by farmers entirely dependent on current incomes. These modifications include a reduction of cash costs by increased use

TABLE 15. LAND USE AND CROPS BEFORE AND AFTER ADOPTION OF SOIL CONSERVATION PLAN ON A SELECTED MEDIUM-SIZED FARM, GREENE COUNTY, GEORGIA[1]

ITEM	GRAYLAND SECTION		REDLAND SECTIONS	
	BEFORE CHANGE	AFTER CHANGE	BEFORE CHANGE	AFTER CHANGE
	acres	*acres*	*acres*	*acres*
Land use				
Cropland used	42.0	51.5	47.0	55.0
Cropland idle	15.0		8.0	
Pasture	11.0	20.0	21.0	21.0
Woodland	46.0	56.5	97.0	102.0
Farmstead and waste	15.0	1.0	7.0	2.0
Total	129.0	129.0	180.0	180.0
Crops				
Cotton	11.0	11.0	10.0	10.0
Corn	17.0	15.0	20.0	20.0
Small grains	7.0	13.0	13.0	15.0
Cowpeas	5.0		4.0	
Lespedeza, annual		13.0		15.0
Crimson clover		15.0		15.0
Kudzu		2.0		8.0
Lespedeza sericea		6.5		
Garden and patches	2.0	2.0	2.0	2.0

[1] Data furnished by Soil Conservation Service.

of labor and equipment already available, lengthening of the transition period so as to reduce costs in any one year, and changes in organization and operation of farms which will increase incomes as costs increase.

LARGE FARMS

ORGANIZATIONS. Alternative organizations for the representative large cotton farm in both the grayland and redland sections are summarized in Table 17. The same acreage harvested for crops is maintained in the reorganizations for the grayland farm. Pasture is increased from 20 to 30 acres by converting the idle cropland. On the farm in the redland sections the acres in cropland are the same as on the representative farm. Pasture is increased from 17 to 30 acres. Two of the alternative organizations have the same acreage of cotton as the representative organization, one has a smaller, and two a larger acreage of cotton than the representative farms. Cropland not in cotton is devoted to feed, food, and soil-conserving crops. Returns from dairy and beef cattle are compared in alternatives with larger than the usual cotton acreage.

LABOR. The distribution of man labor requirements for two of the alternative organizations is compared in Figure 6 with

TABLE 16. CONSERVATION PRACTICES NEEDED AND THE CASH COSTS OF THEIR ESTABLISHMENT ON A SELECTED MEDIUM-SIZED FARM, GREENE COUNTY, GEORGIA[1]

PRACTICES	UNIT OF WORK	TOTAL UNITS NEEDED	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		TOTAL CASH COSTS
			UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	
		number	*number*	*dollars*	*number*	*dollars*	*number*	*dollars*	*number*	*dollars*	*dollars*
GRAYLAND SECTION											
Terracing	acre	49.0	16.0	24.00	16.0	24.00	17.0	25.50			73.50
Establish crimson clover											
Seed	acre	15.0	1.0	2.50	8.0		15.0		15.0		2.50
Establish lepedeza											
Seed	acre	13.0	2.0	3.60	10.0		13.0		13.0		3.60
Establish kudzu											
Crowns	acre	2.0	2.0								
Fertilizers	acre	2.0	2.0	6.40							6.40
Establish lespedeza sericea											
Seed	acre	6.5	3.0	10.80			3.5				10.80
Fertilizers	acre	6.5	3.0	7.20			3.5	8.40			15.60
Pasture improvement											
Additional fence	rod	140.0	140.0	16.80							16.80
Seed	acre	20.0	5.0	17.25	5.0	17.25	5.0	17.25	5.0	17.25	69.00
Fertilizers	acre	20.0	5.0	32.00	5.0	32.00	5.0	32.00	5.0	32.00	128.00
Total costs				120.55		73.25		83.15		49.25	326.20
REDLAND SECTIONS											
Terracing	acre	47.0	12.0	18.00	12.0	18.00	12.0	18.00	11.0	16.50	70.50
Establish crimson clover											
Seed	acre	15.0	1.0	2.50	8.0		15.0		15.0		2.50
Establish lespedeza											
Seed	acre	15.0	4.0	4.80	10.0		15.0		15.0		4.80
Establish kudzu											
Crowns	acre	8.0	4.0		4.0						
Fertilizers	acre	8.0	4.0	9.20	4.0	9.20					18.40
Pasture improvement											
Additional fence	rod										
Seed	acre	21.0	7.0	24.15	7.0	24.15	7.0	24.15			72.45
Fertilizers	acre	21.0	7.0	44.80	7.0	44.80	7.0	44.80			134.40
Total costs				103.45		96.15		86.95		16.50	303.05

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[1] Data on conservation practices furnished by Soil Conservation Service.

TABLE 17. ORGANIZATION AND FINANCIAL SUMMARY OF ALTERNATIVE ORGANIZATIONS OF REPRESENTATIVE LARGE FARMS, GREENE COUNTY, GEORGIA

ITEM	COTTON FARMS					LIVESTOCK FARMS		
	GRAYLAND SECTION				REDLAND SECTIONS	COTTON-DAIRY	DAIRY	COTTON-BEEF CATTLE
	I	II	III	IV	V			
Land use	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*
Cropland	109	109	109	109	80	153	86	135
Pasture	30	30	30	30	30	130	130	100
Woodland	82	82	82	82	90	262	150	350
Farmstead, etc.	4	4	4	4	3	5	4	10
Total	225	225	225	225	203	550	370	595
Crops								
Cotton	14	22	30	30	16	40	12	30
Corn and cowpeas	18	10	2	2	7			2
Corn and velvet beans	32	32	32	32	23	30	32	34
Wheat	9	9	9	9	7	10		8
Oats	23	23	23	23	16	18		16
Lespedeza for hay	(16)	(16)	(16)	(16)	(11)	(14)		(17)
Lespedeza for green manure	(16)	(16)	(16)	(16)	(12)	(14)		(17)
Crimson clover and rye grass	(32)	(32)	(32)	(32)	(23)	(12)	(12)	(17)
Cane for feed						(8)	(10)	2
Oats and vetch						8	10	10
Native grass hay						25		20
Kudzu	10	10	10	10	9	20	30	8
Garden and patches	3	3	3	3	2	2	2	5
Livestock	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*
Workstock	4	4	4	4	3	5	4	5
Dairy cows				16		35	35	
Beef cows	28	26	26		18			28
Sows	1	1	1	1	1	2	2	2
Chickens	30	30	30	30	30	50	50	50

Value of farm property	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*
Land	3,750	3,750	3,750	3,750	1,980	4,950	3,590	7,050
Improvements	840	840	840	840	840	1,375	1,375	970
Machinery	250	250	250	300	220	271	222	185
Livestock	1,316	1,254	1,254	1,000	912	2,939	2,845	2,118
Total	6,156	6,094	6,094	5,890	3,952	9,535	8,032	10,323
Cash receipts								
Crops	406	622	726	726	357	744	261	612
Livestock	549	506	506	742	351	4,240	4,240	783
Woodland	68	68	68	68	127	370	210	490
AAA payments	196	196	196	196	135	315	132	246
Other	40	40	40	40	35	50	50	40
Total	1,259	1,432	1,536	1,772	1,005	5,719	4,893	2,171
Variable cash expenses								
Fertilizers	208	255	273	273	194	381	231	313
Other crop expenses	130	140	149	149	116	156	78	112
Livestock expenses	43	39	77	62	25	977	864	74
Woodland expenses	8	8	8	8	15	74	42	98
Hired labor	200	200	200	200	60	450	360	300
Machinery repair	49	49	49	49	39	99	83	50
Machinery hire						50	50	
Interest	16	16	16	16	4	13		13
Total	654	707	772	757	453	2,200	1,708	960
Receipts less variable cash expenses	605	725	764	1,015	552	3,519	3,185	1,211
Overhead cash expenses[1]	90	90	90	90	50	206	175	136
Net cash return	515	635	674	925	502	3,313	3,010	1,075
Depreciation	120	120	120	122	110	168	144	139
Farm income	395	515	554	803	392	3,145	2,866	936
Interest on investment	239	236	236	226	155	382	327	396
Family labor income	156	279	318	577	237	2,763	2,539	540
Value of family living from farm	450	450	450	450	400	500	500	450
Family labor earnings	606	729	768	1,027	637	3,263	3,039	990

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[1] Includes taxes and building and fence repairs.

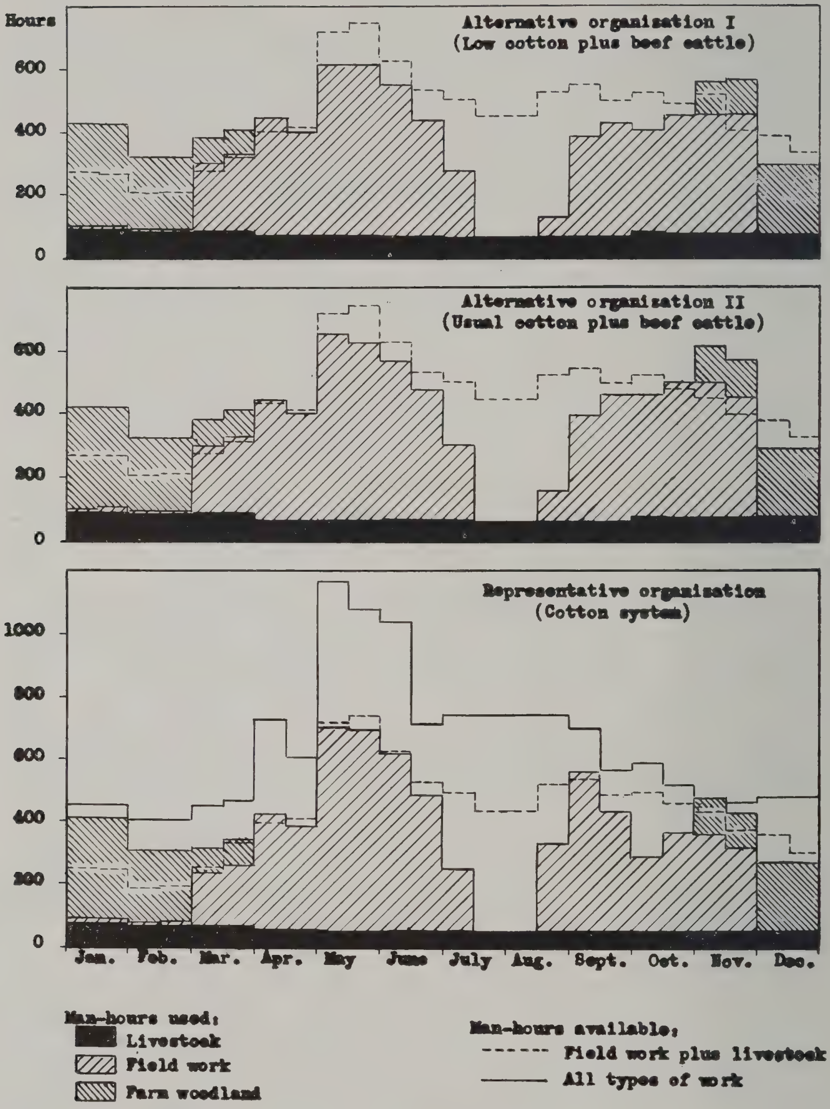

FIG. 6. *Farm labor available compared with labor used for woodlands and other enterprises on cotton system and other alternative organizations, representative large cotton farm, grayland section, Greene County, Georgia.*

the labor utilization on the representative farm. Under the reorganizations the practice of pulling fodder is discontinued. Otherwise cropping practices are continued as at present.

PRESENT INCOMES. Receipts less variable cash expenses, using average prices for 1935-39, increase as the acres in cotton increase. By utilizing land not in cotton for feed crops for beef cattle, the returns in the grayland section are $605 when 14 acres of cotton are grown, $725 when 22 acres are grown, and $764 when 30 acres of cotton are grown. With the lower cotton acreage, income after deductions for depreciation and interest on investment is lower than with the present organization. The return from dairy cattle kept for production of sour cream is larger than that from beef cattle.

INCOMES UNDER VARYING PRICES. Table 18 shows the incomes (receipts less variable cash expenses) for alternative organizations I, II, and III with different cotton, beef cattle, and fertilizer prices. These organizations have 14 acres, 22 acres, and 30 acres of cotton respectively. The land not devoted to cotton is in feed crops to be used primarily for beef cattle. Under most price situations the alternative with the largest cotton acreage has the largest income.

LARGE COTTON-LIVESTOCK FARMS: THEIR REORGANIZATION AND SIMILARITY TO ALTERNATIVE ORGANIZATIONS OF LARGE COTTON FARMS. The existing organizations of large cotton-livestock farms, as shown in Table 7, are similar to the alternative organizations outlined for the large cotton farms; both combine livestock with cotton as an important source of cash income. Many of these farms have large acreages of pasture, much of which is on bottomland. The failure to produce sufficient feed is a weakness in their present organization as indicated by feed purchases exceeding $600 annually. Feed production could be increased on the cotton-dairy farm by interplanting velvet beans with corn, by following small grains with lespedeza, by growing vetch and oats for hay in rotation with cane, and by using 20 acres of the pasture land for kudzu hay (Table 17). This would leave 130 acres for improved pasture, which would provide more grazing than the present acreage of unimproved pasture. On the dairy farm, feed production could be increased by adding vetch and oats to be grown in rotation with cane for silage, by using 30 acres of pasture land for kudzu hay, and by improving the remaining pasture. On the representative beef-cattle farm a very small amount of feed is purchased. With some changes in organization additional feeds may be produced. As a result, some increase in number of cattle will be possible.

CONSERVATION PHASES OF REORGANIZATION. The land use changes needed for conservation on the representative large farms are similar to those shown in Table 19 for selected farms on which soil conservation plans have been developed. The total cash costs of the practices outlined for these farms are about $435 and $429 in the grayland and redland sections respectively (Table 20). These costs are to be distributed over a period of four years. Modifications in these plans similar to those suggested for the small and medium-sized farms may be needed be-

TABLE 18. COMPARISON OF CASH RETURNS[1] FROM ALTERNATIVE ORGANIZATIONS OF REPRESENTATIVE LARGE FARM WITH VARYING PRICES OF COTTON, BEEF CATTLE, AND FERTILIZERS ASSUMING ALL OTHER FACTORS CONSTANT[2]

PRICE OF COTTON LINT PER POUND AND OF COTTON SEED PER TON	FARM ORGANIZATION[3]	CASH RECEIPTS LESS VARIABLE CASH EXPENSES UNDER SITUATIONS INDICATED											
		FERTILIZERS AT PRICES 20 PER CENT LOWER THAN USUAL				FERTILIZERS AT USUAL PRICES[4]				FERTILIZERS AT PRICES 20 PER CENT HIGHER THAN USUAL			
		PRICE OF BEEF CATTLE PER POUND OF LIVE WEIGHT				PRICE OF BEEF CATTLE PER POUND OF LIVE WEIGHT				PRICE OF BEEF CATTLE PER POUND OF LIVE WEIGHT			
		3.00 CENTS	4.43 CENTS	6.00 CENTS	8.00 CENTS	3.00 CENTS	4.43 CENTS	6.00 CENTS	8.00 CENTS	3.00 CENTS	4.43 CENTS	6.00 CENTS	8.00 CENTS
		dollars	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*	*dollars*
Lint, 6 cents Seed, $16	I	158	320	497	732	116	278	455	690	74	236	413	648
	II	225	373	534	750	174	322	483	699	123	271	432	648
	III	208	356	517	733	153	301	462	678	98	246	407	623
Lint, 10 cents Seed, $26	I	289	451	628	863	247	409	586	821	205	367	544	779
	II	432	580	741	957	381	529	690	906	330	478	639	855
	III	475	623	784	1,000	420	568	729	945	365	513	674	890
Lint, 14 cents Seed, $36	I	420	582	759	994	378	540	717	952	336	498	675	910
	II	638	786	947	1,163	587	735	896	1,112	536	684	845	1,061
	III	743	891	1,052	1,268	688	836	997	1,213	633	781	942	1,158

[1] Cash receipts (except AAA payments) less variable cash expenses.

[2] The return figures are based on data from the grayland section.

[3] Summaries of the farm organizations compared are shown in Table 17. Number I includes low cotton acreage with beef cattle added; II includes usual cotton acreage with beef cattle added; and III includes high cotton acreage with beef cattle added.

[4] Average prices paid in the period 1935–39.

TABLE 19. LAND USE AND CROPS BEFORE AND AFTER ADOPTION OF SOIL CONSERVATION PLAN ON A SELECTED LARGE FARM, GREENE COUNTY, GEORGIA[1]

ITEM	GRAYLAND SECTION		REDLAND SECTIONS	
	BEFORE CHANGE	AFTER CHANGE	BEFORE CHANGE	AFTER CHANGE
	acres	*acres*	*acres*	*acres*
Land use				
Cropland used	106.0	105.5	65.3	69.5
Cropland idle	8.0		10.2	
Pasture	15.0	22.0	29.0	26.0
Woodland	52.0	53.5	100.5	109.5
Farmstead	1.0	1.0	2.0	2.0
Total	182.0	182.0	207.0	207.0
Crops				
Cotton	20.0	20.0	18.0	18.0
Corn	25.0	25.0	29.0	17.0
Small grains	14.0	35.0	15.8	20.5
Cowpeas	6.0	4.0		
Lespedeza, annual	25.0	35.0	13.0	13.0
Crimson clover	10.0	50.0		20.0
Kudzu	14.0	14.0		18.0
Lespedeza sericea		4.5		4.5
Garden and patches	2.0	2.0	2.5	1.5

[1] Data furnished by Soil Conservation Service.

fore similar practices can be applied by farmers entirely dependent on current incomes.

REORGANIZATION OF FARMS TO SECURE FAMILY-SIZED UNITS

In the preceding section it has been shown that the farm income may be increased by making fuller utilization of the present cropland. When fully utilized, however, the present cropland acreage on the representative farms is too small to provide full employment to the available workers except in peak labor periods. In the county as a whole, though, and on a large number of the farms there is additional land of varying degrees of productivity suitable for use as cropland and pasture. To determine the acreages needed to provide reasonably full employment to the labor force usually on small and medium-sized farms, adapted organizations have been expanded until labor becomes the limiting factor to size with the present level of farming equipment (Table 21).

These organizations, referred to as "family-sized" farms, were developed largely by the addition of small grains (principally oats) and hay crops to the usual acreage of cotton and corn, and

TABLE 20. CONSERVATION PRACTICES NEEDED AND THE CASH COSTS OF THEIR ESTABLISHMENT ON A SELECTED LARGE FARM, GREENE COUNTY, GEORGIA[1]

PRACTICES	UNIT OF WORK	TOTAL UNITS NEEDED	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		TOTAL CASH COSTS
			UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	UNITS OF WORK NEEDED	OUT-OF-POCKET COSTS	
		number	*number*	*dollars*	*number*	*dollars*	*number*	*dollars*	*number*	*dollars*	*dollars*
GRAYLAND SECTION											
Terracing	acre	86.0	31.0	46.50	32.0	48.00	15.0	22.50	8.0	12.00	129.00
Establish crimson clover											
Seed	acre	50.0	10.0		50.0		50.0		50.0		
Establish lespedeza											
Seed	acre	35.0	25.0		35.0		35.0		35.0		
Establish kudzu											
Crowns	acre	10.0	5.0				5.0				
Fertilizers	acre	16.0	5.0	16.00			5.0	16.00	6.0	19.20	51.20
Establish lespedeza sericea											
Seed	acre	4.5	4.5	16.20							16.20
Fertilizers	acre	4.5	4.5	10.80							10.80
Pasture improvement											
Additional fence	rod	90.0	90.0	10.80							10.80
Seed	acre	22.0	6.0	20.70	6.0	20.70	4.0	13.80	6.0	20.70	75.90
Fertilizers	acre	22.0	6.0	38.40	6.0	38.40	4.0	25.60	6.0	38.40	140.80
Total costs				159.40		107.10		77.90		90.30	434.70
REDLAND SECTIONS											
Terracing	acre	60.0	35.0	52.50	25.0	37.50					90.00
Establish crimson clover											
Seed	acre	20.0	1.5	3.75	8.0		20.0		20.0		3.75
Establish lespedeza											
Seed	acre	13.0	13.0		13.0		13.0		13.0		
Establish kudzu											
Crowns	acre	8.0	8.0								
Fertilizers	acre	8.0	8.0	25.60							25.60
Establish lespedeza sericea											
Seed	acre	4.5	2.5	9.00			2.0	7.20			16.20
Fertilizers	acre	4.5	2.5	6.00			2.0	4.80			10.80
Pasture improvement											
Additional fence	rod	219.0	219.0	26.28							26.28
Seed	acre	26.0	6.0	20.70	6.0	20.70	8.0	27.60	6.0	20.70	89.70
Fertilizers	acre	26.0	6.0	38.40	6.0	38.40	8.0	51.20	6.0	38.40	166.40
Total costs				182.23		96.60		90.80		59.10	428.73

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[1] Data on conservation practices furnished by Soil Conservation Service.

TABLE 21. ORGANIZATION AND FINANCIAL SUMMARY OF FARMS WHICH COULD BE OPERATED BY FAMILY LABOR USUALLY ON SMALL AND MEDIUM-SIZED FARMS, GREENE COUNTY, GEORGIA

ITEM	SMALL FARM[1]		MEDIUM-SIZED FARM[2]	
	GRAYLAND	REDLAND	GRAYLAND	REDLAND
	acres	*acres*	*acres*	*acres*
Land use				
Cropland	49	49	75	75
Pasture	25	25	40	40
Woodland	30	48	50	87
Farmstead, etc.	2	3	3	3
Total	106	125	168	205
Crops				
Cotton	5	5	10	9
Corn and cowpeas	4	4	5	5
Corn and velvet beans	8	8	10	10
Wheat	3	3	4	4
Oats	25	25	36	36
Lespedeza, hay	(14)	(14)	(20)	(20)
Lespedeza, seed	(14)	(14)	(20)	(20)
Kudzu	3	3	8	9
Crimson clover and rye grass	(7)	(7)	(15)	(15)
Garden	1	1	2	2
Livestock	*number*	*number*	*number*	*number*
Workstock	2	2	2	2
Dairy cows	1	1	2	2
Beef cows	15	14	24	23
Sow			1	1
Chickens	20	20	25	30
Value of farm property	*dollars*	*dollars*	*dollars*	*dollars*
Land	1,077	867	1,911	1,505
Improvements	662	374	876	577
Machinery	211	207	206	195
Livestock	833	798	1,183	1,162
Total	2,783	2,246	4,176	3,439
Cash receipts				
Crops	114	108	217	186
Livestock	306	285	533	516
Woodland	11	22	68	127
AAA payments	51	48	84	76
Other	20	20	30	30
Total cash receipts	502	483	932	935
Variable cash expenses				
Fertilizers	119	116	184	186
Other crop expenses	34	41	63	72
Livestock expenses	42	40	35	34
Woodland expenses	1	2	8	15
Machinery repair	12	12	22	23
Interest	3	3	2	3
Total variable cash expenses	211	214	314	333
Receipts less variable cash expenses	291	269	618	602
Overhead cash costs[3]	30	30	40	35
Net cash return	261	239	578	567
Depreciation	60	50	70	65
Farm income	201	189	508	502
Interest on investment	113	94	167	141
Family labor income	88	95	341	361
Value of family living from farm	250	235	345	335
Family labor earnings	338	330	686	696

[1] Laborers consist of farm operator, his wife, and 2 children, large enough to work.
[2] Laborers consist of farm operator, his wife, 1 boy over 16, 2 boys under 16 ,and 2 girls.
[3] Includes taxes and building and fence repairs.

by the addition of sufficient livestock to utilize the increased feed produced. The acreage of small grains is relatively large on these farms, since such crops, combined with lespedeza utilize labor in slack periods better than most adapted crops. With these crops the operator and his family are able to handle an acreage of cropland approximately double that which they handle with the present organization of these farms. In some instances, of course, other crops might be more desirable.

The representative small cotton farm uses about 136 days of labor on crop enterprises. With the family-sized organization labor requirements for crops would be about 215 days (Figure 7). Such an expansion would necessitate the addition of a second mule. Livestock would have to be cared for in addition to the total man days for crops, but this would not press the family except during rush seasons. During these periods—May 15 through June 15 and September 15 through October 15—longer hours would be required on days suitable for field work. There would be little difference in the family labor income from family-sized units, outlined in Table 21, for the grayland and redland sections. In the grayland section, the net cash return would

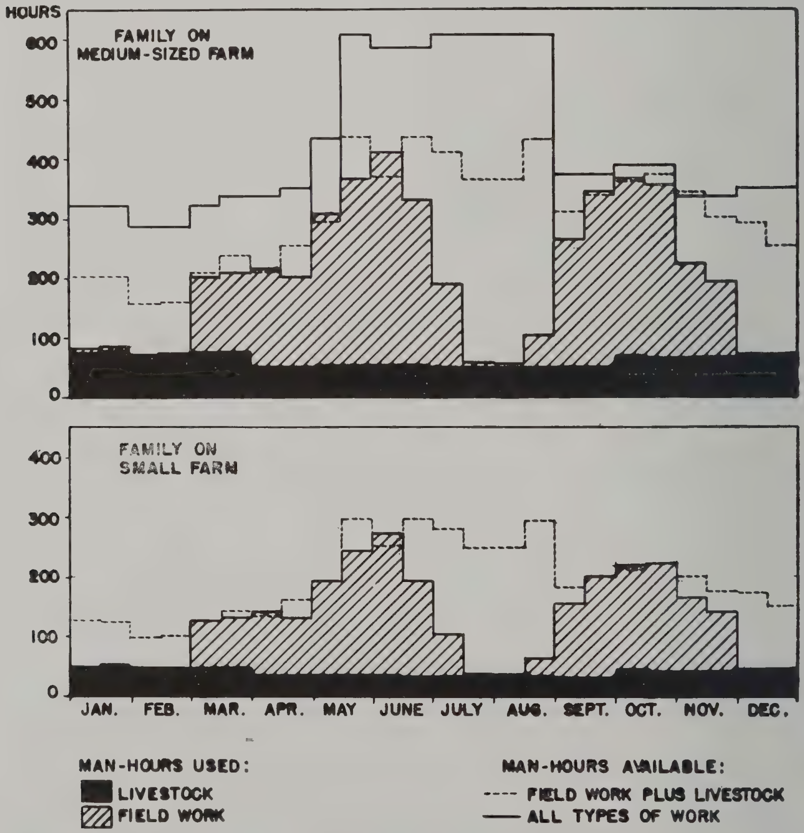

FIG. 7. *Labor requirements on cotton-livestock farms that could be operated with family labor usually on small and medium-sized cotton farms, Greene County, Georgia.*

be $261 compared with $136 from the typical setup on small cotton farms. In the redland, the increased net cash income would be $239 compared with $120 from the present small cotton farms.

Similar increases could be obtained if families on medium-sized farms were to expand their businesses. On medium-sized cotton farms, in the grayland section, about 240 days of labor are used on crops. A family-sized business, outlined for these larger families, would require about 340 days of crop labor. This together with work on livestock could be done by the family. The net cash returns on the medium-sized cotton farm would increase from $265 to $578 in the grayland section and from $242 to $567 in the redland sections. The family labor income would increase about two and one-half times, indicating that the expansion could be paid for and that the return per day for the additional work would be greater than at present.

TABLE 22. INCREASED INVESTMENT REQUIRED ON REPRESENTATIVE SMALL AND MEDIUM-SIZED COTTON FARMS TO SECURE FAMILY-SIZED UNITS, GREENE COUNTY, GEORGIA

ITEM	SMALL FARM		MEDIUM-SIZED FARM	
	GRAYLAND SECTION	REDLAND SECTIONS	GRAYLAND SECTION	REDLAND SECTIONS
	dollars	*dollars*	*dollars*	*dollars*
Land	476	268	576	420
Barn	150	150	200	200
Fence	30	25	30	30
Livestock				
Workstock	153	153		
Cattle	525	490	875	850
Machinery and equipment				
Mower	95	95	95	95
Rake	47	47	47	47
Turning plow	8	8		
Planter	7	7		
Plow stock	3	3		
Harness	7	7		
Total	1,501	1,253	1,823	1,642

The increase in return which would result from the expansion of businesses for families on medium-sized farms is appreciably greater than the increase from the expansion for the smaller family. The variation in the rate of increase arises from the more effective utilization of equipment, workstock, and other investment items in the larger businesses. By hiring 120 days of labor, the operator with the small family labor force would be able to operate the larger of these family-sized units. With the hired labor at 75 cents per day, this would increase the family labor income from $88 to $251. Under this arrangement operations would be dependent upon hired labor.

The present incomes from representative small and medium-sized cotton farms compared with incomes from alternative organizations with the same land base, make it apparent that operators on small and medium-sized farms must have more land if they are to improve their incomes appreciably by adding extensive feed and livestock enterprises. The opportunity to obtain these increased returns depends not only upon a greater amount of cropland, but also a larger farm investment. Data in Table 22 show an approximation of the increased investments needed if the additional resources in the larger businesses were to be purchased. The investment increases, however, would not necessarily mean cash outlays of these amounts. In many instances the additional cropland could be obtained by bringing into cultivation land already available on many farms in this section of the Piedmont. A large part of the livestock may be raised from a few stock cows purchased or from cows already on the farm.

The establishment of conservation practices essential to maintenance of the suggested system involves additional cash costs. On the small farms, as expanded, such costs approximate those itemized in Table 16 for the medium-sized cotton farms, minus fencing costs. They amount to about $310. The medium-sized family farm has about the same crop acreage as the large cotton farms on which the cost of recommended conservation practices is about $425 without fencing (Table 20). Some of these costs may be reduced and extended over a fairly long period. In other cases they would have to be distributed over a period of years on the basis of a long-time, well-planned program of development.

HOW COMPLETE ACCOMPLISHMENT OF ADJUSTMENTS WOULD AFFECT THE FARMING ECONOMY OF THE COUNTY

The preceding sections have been concerned with the effects of various adjustments on the economy of individual farms. The probable effects upon the farm economy of the county as a whole, if these opportunities were to be utilized on all farms are shown by the data in Table 23.

ADJUSTMENTS WITH PRESENT LAND ACREAGES

The organizations used as a basis for estimates in Table 23 are those including the usual acreage of cotton and a beef cattle enterprise. It was assumed that farms including a sizable dairy enterprise would continue unchanged. These adjustments, if made on all farms in the county, would result in about four times as large an acreage of non-soil-depleting crops and approximately twice as great an acreage of small grains. Such adjust-

TABLE 23. APPROXIMATIONS OF ACRES OF CROPLAND, ACRES OF SPECIFIED CROPS, AND VALUE OF SELECTED ITEMS WITH PRESENT ORGANIZATIONS, WITH SELECTED ALTERNATIVE ORGANIZATIONS WITH PRESENT LAND ACREAGES, AND WITH ORGANIZATION TO SECURE FAMILY-SIZED FARMS, GREENE COUNTY, GEORGIA[1]

ITEM	PRESENT ORGANIZATION				SELECTED ALTERNATIVE ORGANIZATIONS WITH PRESENT LAND BASES				REORGANIZATION TO SECURE FAMILY-SIZED UNITS FOR ALL FARM FAMILIES
	SMALL FARMS	MEDIUM-SIZED FARMS	LARGE FARMS	ALL SIZES	SMALL FARMS	MEDIUM-SIZED FARMS	LARGE FARMS	ALL SIZES	
	number	*number*	*number*	*number*	*number*	*number*	*number*	*number*	*number*
Number of farms	533	313	180	1,026	533	313	180	1,026	1,381
	acres	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*	*acres*
Acres of cropland	12,259	14,523	18,950	45,732	12,792	14,465	18,900	46,157	83,945
Acres of specified crops									
Cotton	2,665	3,024	3,985	9,674	2,665	3,083	4,010	9,758	9,673
Corn	5,250	5,917	6,535	17,702	3,731	4,078	6,220	14,029	18,450
Wheat	1,332	1,193	1,405	3,930	1,333	1,252	1,405	3,990	4,769
Other general crops	1,742	1,834	2,612	6,188	3,465	3,516	4,455	11,436	43,418
Non-soil-depleting crops	1,332	1,679	3,237	6,248	8,528	8,749	12,075	29,352	68,494
	dollars (000)	*dollars* (000)	*dollars* (000)	*dollars* (000)	*dollars* (000)	*dollars* (000)	*dollars* (000)	*dollars* (000)	*dollars* (000)
Total value of selected items									
Farm real estate	460	551	769	1,780	623	645	841	2,109	2,514
All farm property	565	676	986	2,227	810	894	1,145	2,849	4,138
Livestock receipts	11	30	117	158	65	92	163	320	546
Woodland receipts		2	6	8	10	31	37	78	79
All cash receipts	106	135	260	501	164	219	333	716	953
Fertilizer expenditures	19	22	33	74	31	37	45	113	204
All variable cash expenses	35	42	125	202	68	73	144	285	365
Cash receipts less variable cash expenses	71	93	135	299	96	146	189	431	588
Net cash return	66	87	119	272	87	139	172	398	542
Farm income	50	73	97	220	67	121	150	338	461
Family labor income	29	47	59	135	36	86	106	228	291
Family labor earnings	156	153	128	437	163	192	184	539	684

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[1] These approximations were made by multiplying the value of items shown for the representative and alternative organizations by the number of farms in the groups for which these organizations were representative.

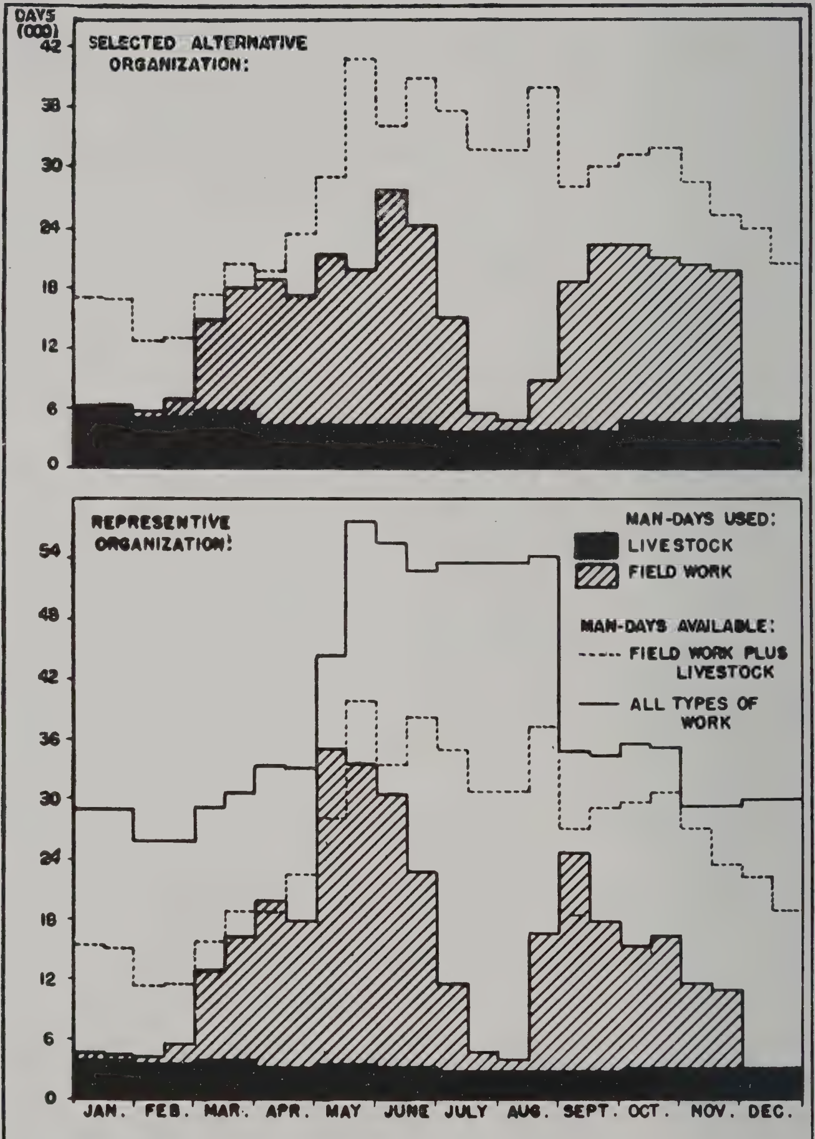

FIG. 8. *Farm labor available compared with labor used for crops and livestock on present and selected alternative organizations, all farms, Greene County, Georgia.*

ments would contribute much towards the conservation of the county's land resources. At the same time they would provide an increase of $118,000 in the total farm income. Such increase would make a substantial addition to the county's capacity for building and maintaining roads, schools, churches, and other service institutions. The welfare of both farm and non-farm families would be benefitted.

With these adjustments enough surplus labor still remains during slack farming seasons to perform 562,000 days of work of which 284,000 days are suitable for field work (Figure 8). Utilization of such surplus labor in productive work is a major rural problem in the area.

ADJUSTMENT TO SECURE FAMILY-SIZED FARMS

Adjustments to secure a family-sized unit for all farm families in the county would increase the acreage of cropland from about 46,000 acres to 84,000 acres. This could almost be accomplished if most of the Class III land were brought into production (Table 25). Total cash receipts would be increased from $501,000 to $953,000 and farm income increased from $220,000 to $461,000 (Table 23). This income both because of the amount and the desirable distribution would pay for many essentials now lacking for the well-being of farm people.

OBSTACLES TO ADJUSTMENTS WITH PRESENT ACREAGES

Two approaches to farm adjustment have been outlined in this study: (1) adjustments with present cropland acreages and (2) adjustments with cropland acreages increased to obtain family-sized farms. In both of these approaches the adjustments outlined are within the limits of land and labor available. The amount of operating capital would need to be increased to enable the most productive use of the available land and labor. The adjustments outlined under the first of the above considerations can be made with the least difficulty.

SMALL FARMS

If young breeding stock is purchased and if custom rates are paid for terracing, an increase of about $350 in investment is needed to adjust the present small cotton farm to a cotton-livestock system. With present cash returns of $120 to $136, farmers operating such units have not been able to accumulate the reserves that these changes require. In most instances these operators will need credit. Credit arrangements for resource development should be made with full realization that the increased farm returns from these changes will not be large and that a long period of time will be required to repay the loan.

With the alternative organization used as the basis of estimates in Table 23 (present cotton acreage plus beef cattle), the increase in annual net cash income would be approximately $40. If this increase were realized in the first year and if all of the increased income were used to repay the loan, the farmer would need more than eight years to repay the principal; if interest were charged at 3.5 per cent, more than ten years would be required to amortize the loan completely. Costs for improvements on the dwelling are not included. If made, they would have to be added to the costs shown above, and the repayment period extended accordingly.

On the small farms the acreage in hay and small grains are too small to justify each farmer having a mower, hay rake, and grain-harvesting machinery. In the alternative organizations outlined in this study, charges were made at custom rates for mowing hay and doing other field operations requiring equipment and power not already on the farm. Data from survey records, however, indicate that in 1938 there were too few mowers, hay rakes, and other large implements to serve all farms if the alternative organizations were widely adopted. On the basis of data from survey records, it is estimated that eight small farms, or one medium-sized farm plus five small farms, would about utilize the capacity of a two-horse mower.

Educational and action agencies with programs in Greene County may wish to consider ways and means of making the services of mowing machines available to farmers in the county. With the present limitations to size on small farms, the addition of more workstock would not be economical. For farming operations requiring an extra mule, operators of small farms will have to resort to cooperative effort or else hire the operation done or hire an additional mule at custom rates.

On farms operated by tenants (Table 24) the problem of financing the improvements needed is further complicated by the

TABLE 24. TENURE BY TYPE AND SIZE OF FARMS, GREENE COUNTY, GEORGIA, 1938[1]

TYPE AND SIZE	ALL FARMS	OWNERS	TENANTS
	number	*per cent*	*per cent*
Cotton farms			
30 acres and less of cropland	443	40	60
30.1-60 acres of cropland	268	42	58
60.1 acres and above of cropland	125	63	37
All sizes	836	44	56
Cotton-livestock farms (all sizes)	100	74	26
Subsistence and part-time farms (all sizes)	90	47	53
All types and sizes of farms	1,026	47	53

[1] Data obtained from AAA records, mailed questionnaires, and personal interviews.

fact that the decisions, responsibilities, and rights of two people are involved. Under the present cotton system rental arrangements are accepted and understood by tenants and landlords alike. With improvement in woodland management, addition of livestock, construction of buildings and fences, pasture improvements, etc., questions arise as to the proper division of receipts and expenses and as to methods of protecting the rights of both landlords and tenants in improvements that are made. Since organizations similar to the alternative organizations outlined in this study are practically non-existent on tenant-operated land in this area, farmers cannot draw on current practices in solving these problems. Recent studies of renting arrangements in Georgia provide a basis for the answers to some of these questions.[1]

It is evident that considerably larger quantities of home-produced food are needed on small farms. Often, however, storage and processing facilities are inadequate or lacking, and without the type of assistance now provided—credit and supervisory aid—it is doubtful if many of the families on such units could overcome current limitations affecting production for home use.

Other obstacles to the adjustments outlined include a lack of skill on the part of many farmers in performing new practices involved in these changes. Few of these farmers have ever inoculated legume seeds, saved lespedeza seed, done selective woodland cutting, or mulched gall spots with brush. They can learn to do these things, just as they learned to grow cotton under boll weevil conditions. However, they will need technical assistance and guidance. Proper coordination of effort by the personnel in educational and action agencies in the county is needed to provide adequate technical assistance to farmers in the county.

MEDIUM-SIZED FARMS

The availability of two mules frees the operators of medium-sized farms from several of the difficulties confronting operators of small farms in making adjustments. Few of the families on medium-sized farms, however, have been able to accumulate cash savings; hence they would have to depend on credit as a source of funds with which to finance the adjustments outlined. A cash expenditure of approximately $550 will be needed for the improvements essential to the adoption of the systems of farming outlined. This additional investment would have a faster rate of turnover than on small farms. It is estimated that net cash incomes would increase approximately $120 per year. About five years would be needed to repay this loan with interest at 3.5 per cent. Some of the operators of medium-sized farms could probably increase their incomes by doing custom work, such as mowing, for some of their neighbors.

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[1] Elrod, J. C., Young, D. E., and Fullilove, W. T., *Farm Rental Arrangements in Georgia*, Bulletin 220, Georgia Experiment Station, Experiment, Georgia, May 1942.

It is less difficult on a medium-sized farm than on a small farm to develop farm plans that will provide a living for the family and conserve the soil. Some operators will be able to shift their businesses gradually to such a basis without managerial assistance, some will need a limited amount of advice and suggestions, while others will need intense managerial assistance. Adjustments in landlord-tenant relationships, similar to those suggested on small farms, are needed.

LARGE FARMS

Operators of large cotton farms have larger cash incomes than operators of small or medium-sized farms. Most of them have mowers, hay rakes, and other larger implements. They grow a larger acreage of small grains and can secure grain-harvesting equipment more easily than operators of small farms. They also have three or more mules and can perform operations requiring larger amounts of power than is available on small and medium-sized farms.

Those farmers who are free of debt might be able to pay the cash costs involved in the adjustments outlined from current incomes, provided the adjustments are spread over a period of years. If the cattle could be raised from stock already on the farms, the adjustments outlined could be made at a cash cost of about $500, or if young cattle are purchased, at a cash cost of about $775. The rate of turnover on these increased investments would be relatively fast, the increase in farm income resulting from these adjustments would be $148 on the large cotton farm in the grayland section (Alternative II, Table 17).

Adjustments will need to be made in landlord-tenant relationships similar to those mentioned on small and medium-sized farms for tenant operators. The percentage of large cotton farms operated by tenants, however, is much smaller than for small and medium-sized farms (Table 24).

The adjustments outlined can be made with less difficulty on large farms in the cotton-livestock system than on any other group of farms. These farmers have relatively high cash incomes, they have already developed many of the skills needed in livestock production, and most of them are owner operators.

OBSTACLES TO ADJUSTMENTS TOWARD OBTAINING FAMILY-SIZED FARMS

INSTITUTIONAL FACTORS

Adjustments to secure family-sized units for all families now on small and medium-sized units or on units of 60 acres or less of cropland involve all of the problems inherent in the adjustments on farms with their existing sizes. Many additional problems arise mainly from the area's institutional organization.

To provide family-sized units for all families now on farms of 60 acres or less of cropland would require a total acreage considerably greater than is in the units now operated by these families. In the case of tenants the additional land frequently may be rented from the present landlord. Where two or more tenants are operating as two units on one tract, these may be combined to establish a family-sized unit for one tenant, while the other tenant is moved to a new farm. If the large farms are to remain unchanged, however, much of the additional land needed would have to be taken from the large area of land not now in farms. This land might be obtained by lease or by purchase. Its development would, of course, involve considerable cash costs. Owner families on small units with no adjacent land available for increasing the size of farm may experience greater difficulty in adjusting to family-sized units than tenants.

The establishment of individually and independently operated units for all families would seemingly require a program of radical action. Family-sized units, however, do not necessarily need to be individually and independently operated, although many of this type might be encouraged. Family-sized units might well be organized within the present institutional setup, either as tenant-operated farms or as cropper units on plantation farms. In many such cases this would mean the development of the land resources included in the unit now operated. On the other hand, the adjustments outlined might serve as the basis for the establishment of better-sized and better-balanced farm units resulting from the breakdown in the larger plantation units, a trend that has been in progress in the county since the early 1920's.

AVAILABILITY OF LAND RESOURCES

As the reorganizations described for family-sized units would require changes in the size of farms, an analysis of the farm population and of the land resources of the area is necessary to determine the extent to which land would be available for such changes. In each section of the county the land resources, by capability classes, have been estimated (Table 2) from the land use capability map. Realizing that an approach to the problem would probably start with the establishment of family-sized units for families now on small and medium-sized farms, the first attempt here is to indicate what amount of land of various use capabilities, exclusive of land now in large farms, could be used more intensively (with suitable soil-conserving practices). Not all of the land now in large farms, however, is utilized in ways that will give the largest return. Therefore, to approximate the possible long-time shifts and adjustments in size that could occur in these sections, the amount of land needed if all families of the area, including croppers, were operating family-sized units, has been determined separately. This roughly represents the amount of land needed, whether each family unit is operated as a separate farm or as an integral part of a plantation system if about the same level of equipment is used.

In comparing the amount of land needed for family units, the cropland needed for adjustments indicated is compared with the amount of land in capability classes I, II, and III, the classes suitable for crops with varying degrees of intensity of conservation practices. Pasture would be developed largely from class IV and from land in the first three classes not needed for cropland. Land in class V and land in other classes not needed for other uses would be in forest. A comparison of the amount of land needed and the amount of land available for establishing family-sized units in farming sections in Greene County is shown in Table 25.

For the county as a whole 222,865 acres (Item 5, Table 25) would be required if farms of more than 60 acres of cropland remained the same in size and if family-sized units were established for all families on farms of less than this size. If adjustments were made to obtain family-sized units for all families, about 209,627 acres (Item 7, Table 25) would be needed. The former type of adjustment would leave approximately 40,000 acres (Item 6, Table 25) and the latter type approximately 53,000 acres (Item 8, Table 25) that might be used either as additional acreages of pasture and woodland on these farms or for additional farm units. These amounts of land would accomodate about 280 and 375 family-sized units respectively.

These calculations have not considered the number of wage families on farms in each section. If the number of wage families is estimated at 350, approximately the same as the number of croppers, the amount of land needed to provide family-sized units for all families, including wage families, would be increased from 209,627 to 246,727 acres, and only about 16,000 acres would be left that might be used for additional units in the county as a whole.

Adjustments to family-sized units would necessitate shifts in farm population from one farming section to another and from one farm to another within farming sections. The Southeastern Section lacks about 11,000 acres of providing family-sized units for all families now on units of 60 acres or less of cropland assuming larger farms are not changed. It lacks 2,555 acres of providing family-sized units for all farm families. Adjustments to family-sized units for all families in the Eastern Section would require a slightly larger total acreage than is available, though the acreage suitable for cropland is 16,925 acres compared with 9,150 acres needed. In the other farming sections the acreages available for establishment of family-sized farms are considerably larger than the acreages needed either for adjustment of farms with 60 acres and less of cropland or for establishment of family-sized units for all farm families.

Such adjustments as would be necessary to secure family-sized units would involve the slow and difficult process of shifting large acreages from one land use to another, as well as shifts in farm population. If the entire land resources of the county were organized into family-sized units similar to those described above, the use of land according to land use capabilities would necessitate the shifting of approximately 12,000 acres of cropland, largely idle, and 4,000 acres of pasture into forest production. More than 62,000 acres now in woodland would have to be shifted into crops and 17,000 acres into pasture. Thus, approximately 16,000 acres would need reforestation or protection to permit natural reforestation, and about 80,000 acres would require the removal of forest growth for crop and pasture use. In many cases it may never be feasible to clear this land for crop production, and in other cases it may be profitable to do so only after the present stand of timber has matured and become ready for marketing. The extent to which the land resources may be utilized according to their capabilities is further limited by the fact that much of it is in small areas or strips located along small streams or within areas that would remain in forests and may not be very accessible.

It is recognized that the calculations shown in Table 25 are merely indicative of some possibilities of land development and use and that they are subject to numerous limitations of accomplishment or application. The land use capability classification used here is based on physical characteristics of the land and does not necessarily indicate its best use from an economic viewpoint.

TABLE 25. ACRES OF LAND IN VARIOUS LAND USE CAPABILITY CLASSES COMPARED WITH LAND NEEDED IN EACH CLASS FOR ESTABLISHMENT OF FAMILY-SIZED FARMS IN FARMING SECTIONS, GREENE COUNTY, GEORGIA

ITEM	CAPABILITY CLASSES[1]			
	I, II, AND III	IV	V	ALL CLASSES
SOUTHEASTERN SECTION	*acres*	*acres*	*acres*	*acres*
(1) Total acreage in section	48,630	3,328	8,459	60,417
(2) Acreage not in large farms[2]	19,192	1,317	3,339	23,848
(3) Acreage in large farms[2]	29,438	2,011	5,120	36,569
(4) Acreage needed to secure family-sized farms for families on small and medium-sized farms	16,175	8,475	10,440	35,090
(5) Total land needed for adjustments as outlined under (4), or (3) plus (4)	45,613	10,486	15,560	71,659
(6) Difference between (1) and (5)	3,017	–7,158	–7,101	–11,242
(7) Acreage needed to secure family-sized units for all farm families	28,918	15,250	18,804	62,972
(8) Difference between (1) and (7)	19,712	–11,922	–10,345	–2,555
EASTERN SECTION				
(1) Total acreage in section	16,925	3,532	3,058	23,515
(2) Acreage not in large farms[2]	12,282	2,565	2,220	17,067
(3) Acreage in large farms[2]	4,643	967	838	6,448
(4) Acreage needed to secure family-sized farms for families on small and medium-sized farms	6,496	3,370	6,784	16,650
(5) Total land needed for adjustments as outlined under (4), or (3) plus (4)	11,139	4,337	7,622	23,098
(6) Difference between (1) and (5)	5,786	–805	–4,564	417
(7) Acreage needed to secure family-sized units for all farm families	9,150	4,755	9,675	23,580
(8) Difference between (1) and (7)	7,775	–1,223	–6,617	–65
NORTHERN SECTION				
(1) Total acreage in section	42,842	11,875	36,482	91,199
(2) Acreage not in large farms[2]	31,805	8,822	27,089	67,716
(3) Acreage in large farms[2]	11,037	3,053	9,393	23,483
(4) Acreage needed to secure family-sized farms for families on small and medium-sized farms	13,184	6,845	13,831	33,860
(5) Total land needed for adjustments as outlined under (4), or (3) plus (4)	24,221	9,898	23,224	57,343
(6) Difference between (1) and (5)	18,621	1,977	13,258	33,856
(7) Acreage needed to secure family-sized units for all farm families	20,754	10,805	22,101	53,660
(8) Difference between (1) and (7)	22,088	1,070	14,381	37,539

TABLE 25. ACRES OF LAND IN VARIOUS LAND USE CAPABILITY CLASSES COMPARED WITH LAND NEEDED IN EACH CLASS FOR ESTABLISHMENT OF FAMILY-SIZED FARMS IN FARMING SECTIONS, GREENE COUNTY, GEORGIA (CONTINUED)

ITEM	CAPABILITY CLASSES[1]			
	I, II, AND III	IV	V	ALL CLASSES
WEST RIVER SECTION				
	acres	*acres*	*acres*	*acres*
(1) Total acreage in section	12,971	5,808	8,839	27,618
(2) Acreage not in large farms[2]	6,900	3,095	4,705	14,700
(3) Acreage in large farms[2]	6,071	2,713	4,134	12,918
(4) Acreage needed to secure family-sized farms for families on small and medium-sized farms	5,100	2,660	5,460	13,220
(5) Total land needed for adjustments as outlined under (4), or (3) plus (4)	11,171	5,373	9,594	26,138
(6) Difference between (1) and (5)	1,800	435	–755	1,480
(7) Acreage needed to secure family-sized units for all farm families	10,360	5,425	11,240	27,025
(8) Difference between (1) and (7)	2,611	383	–2,401	593
SOUTHWESTERN SECTION				
(1) Total acreage in section	23,307	8,984	27,509	59,800
(2) Acreage not in large farms[2]	15,631	6,032	18,455	40,118
(3) Acreage in large farms[2]	7,676	2,952	9,054	19,682
(4) Acreage needed to secure family-sized farms for families on small and medium-sized farms	9,684	5,035	10,226	24,945
(5) Total land needed for adjustments as outlined under (4), or (3) plus (4)	17,360	7,987	19,280	44,627
(6) Difference between (1) and (5)	5,947	997	8,229	15,173
(7) Acreage needed to secure family-sized units for all farm families	16,362	8,532	17,496	42,390
(8) Difference between (1) and (7)	6,945	452	10,013	17,410
TOTAL FOR GREENE COUNTY				
(1) Total acreage in county	144,675	33,527	84,347	262,549
(2) Acreage not in large farms[2]	85,810	21,831	55,808	163,449
(3) Acreage in large farms[2]	58,865	11,696	28,539	99,100
(4) Acreage needed to secure family-sized farms for families on small and medium-sized farms	50,639	26,385	46,741	123,765
(5) Total land needed for adjustments as outlined under (4), or (3) plus (4)	109,504	38,081	75,280	222,865
(6) Difference between (1) and (5)	35,171	–4,554	9,067	39,684
(7) Acreage needed to secure family-sized units for all farm families	85,544	44,767	79,316	209,627
(8) Difference between (1) and (7)	59,131	–11,240	5,031	52,922

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[1] For description of capability classes see footnote to Table 2.

[2] Large farms include all farms having more than 60 acres of cropland.

APPENDIX

TABLE 1. USUAL YIELDS PER ACRE FOR SPECIFIED CROPS, GREENE COUNTY, GEORGIA

CROP	UNIT	GRAYLAND SECTION	REDLAND SECTIONS	CROP	UNIT	GRAYLAND SECTION	REDLAND SECTIONS
Cotton, lint	pound	195	180	Oats, grain	bushel	18.0	18.0
Cotton, seed	pound	350	325	Oat straw	pound	500	500
Corn alone, grain	bushel	11.0	10.0	Peppers	ton	1.3	1.3
Corn alone, fodder	bundle	100	100	Crimson clover seed	pound	200	200
Corn and cowpeas				Lespedeza, seed	pound	200	200
Grain	bushel	9.0	8.5	Lespedeza hay	pound	1,500	1,500
Fodder	bundle	100	100	Cowpeas, seed	bushel	4.5	3.5
Cowpeas	bushel	1.5	1.5	Cowpea hay	pound	1,000	1,000
Corn and velvet beans				Oat and vetch hay	pound	1,500	1,500
Grain	bushel	10.0	7.0	Meadow hay	pound	2,000	2,000
Velvet beans	pound	400	400	Sericea, seed	pound	250	250
Wheat, grain	bushel	8.0	8.7	Sericea hay	pound	2,000	2,000
Wheat straw	pound	640	640	Kudzu hay	pound	2,000	2,000

TABLE 2. FERTILIZER PRACTICES: KINDS AND AMOUNTS PER ACRE USUALLY APPLIED ON CROPS, GREENE COUNTY, GEORGIA

CROP	GRAYLAND SECTION				REDLAND SECTIONS			
	APPLIED BEFORE PLANTING		TOPDRESSING		APPLIED BEFORE PLANTING		TOPDRESSING	
	KIND[1]	AMOUNT	KIND[2]	AMOUNT	KIND[1]	AMOUNT	KIND[2]	AMOUNT
		pounds		*pounds*		*pounds*		*pounds*
Cotton	3–9–3	200	soda	100	3–9–3	250	soda	75
Corn alone			soda	35			soda	35
Corn and cowpeas	phosphate	100	soda	75	3–9–3	75		
Corn and velvet beans			soda	100			soda	100
Cowpeas								
Wheat			soda	75			soda	100
Oats			soda	75			soda	75
Austrian peas								
Crimson clover								
Cane	3–9–3	200			3–9–3	200		
Pepper	5–7–5	400	soda	100	5–7–5	400	soda	100
Vetch								
Vetch and oats			soda	75			soda	75
Kudzu establishment	phosphate	300			phosphate	300		
Sericea	phosphate	300			phosphate	300		

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[1] Mixtures refer to nitrogen, phosphorus, and potash in the order named.
[2] "Soda" is the local term used for nitrate of soda.

TABLE 3. USUAL AMOUNTS OF SEED USED PER ACRE FOR SPECIFIED CROPS, GREENE COUNTY, GEORGIA

CROP	UNIT	QUAN.
Cotton	bushel	1
Corn	gallon	1
Cowpeas in corn	gallon	4
Velvet beans in corn	gallon	7
Cowpeas	gallon	6
Wheat	bushel	1
Oats	bushel	2
Austrian peas	pound	25
Crimson clover	pound	20
Cane	gallon	2
Pepper seed	pound	1
Vetch	pound	25
Vetch and oats		
Vetch	pound	10
Oats	bushel	2
Lespedeza	pound	20
Sericea	pound	30
Kudzu	crown	500
Pasture mixture[1]		
Lespedeza	pound	10
White dutch clover	pound	2
Dallis grass	pound	5
Crimson clover and rye grass		
Crimson clover	pound	15
Rye grass	pound	7

[1] This mixture is one of the most frequently recommended but there is often variation in the amounts of seed suggested.

TABLE 4. PRICES USED IN DETERMINING USUAL INCOMES OF FARM ORGANIZATIONS, GREENE COUNTY, GEORGIA

ITEM	UNIT	PRICE
PRICES RECEIVED		
Cotton, lint	pound	$ 0.10
Cotton, seed	ton	26.00
Wheat	bushel	1.05
Corn, grain	bushel	0.77
Corn fodder	bundle	0.015
Oats	bushel	0.56
Peppers	ton	28.00
Cowpeas	bushel	1.43
Grass hay	ton	9.43
Legume hay	ton	15.35
Mixed hay	ton	12.00
Beef cattle	cwt.	4.43
Veal calves	cwt.	5.80
Hogs	cwt.	7.42
Milk cows	head	34.00
Mules	head	153.00
Chickens	pound	0.16
Milk	cwt.	2.50
Butterfat	pound	0.25
Butter	pound	0.24
Eggs	dozen	0.23
PRICES PAID		
Fertilizers:		
3–9–3	ton	$23.00
5–7–5	ton	27.00
Nitrate of soda	ton	35.00
Phosphate (16%)	ton	16.00
Limestone	ton	4.00
Ginning, bagging and ties	bale	3.00
PRICES PAID (Continued)		
Feeds		
Wheat shorts	cwt.	$1.50
Mash	cwt.	3.00
Salt	cwt.	1.20
Seeds		
Pepper	pound	1.00
Crimson clover	pound	0.10
Annual lespedeza	pound	0.06
White dutch clover	pound	0.50
Lespedeza sericea	pound	0.12
Dallis grass	pound	0.45
Kudzu crowns	thousand	5.00
Austrian peas	pound	0.05
Oats	bushel	0.75
Rye grass	pound	0.10
Vetch	pound	0.10
Threshing wheat[1]	bushel	0.105
Combining wheat[1]	bushel	0.21
Mowing	acre	1.20
Terracing	acre	1.50
Horseshoeing	head	2.00
Breeding fees	head	1.00
Barbed wire	rod	0.04
Baling hay	cwt.	0.10
Pigs purchased	head	3.00
Hauling milk	cwt.	0.40
Hauling cattle	head	0.75
Hauling peppers	ton	3.00
Calcium arsenate	pound	0.075

[1] Most farmers pay a part of the crop rather than cash for threshing and combining small grains. The usual toll paid is one-tenth and one-fifth for threshing and combining, respectively.

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ABLE 5. Approximations of Acres of Cropland, Acres of Specified Crops, and Value o
elected Items under Present and Selected Alternative Farm Organizations by Farmin
Sections, Greene County, Georgia

Item	All Farms				
	Southeastern Section	Eastern Section	Northern Section	West River Section	Southwest-ern section
	number	*number*	*number*	*number*	*number*
umber of farms	328	125	268	111	194
REPRESENTATIVE ORGANIZATIONS					
	acres	*acres*	*acres*	*acres*	*acres*
cres of cropland	17,760	4,367	10,612	5,309	7,684
cres of specified crops					
Cotton	3,702	927	2,265	1,145	1,635
Corn	6,627	1,747	4,245	2,037	3,046
Wheat	1,436	411	942	454	687
Other general crops	2,074	639	1,552	790	1,133
Non-soil-depleting crops	3,016	484	1,200	656	892
	dollars	*dollars*	*dollars*	*dollars*	*dollars*
otal value of selected items	(000)	(000)	(000)	(000)	(000)
Farm real estate	763	151	388	198	280
All farm property	936	190	493	253	355
Livestock receipts	62	10	39	22	25
Woodland receipts	2	1	2	1	2
All cash receipts	204	42	115	60	80
Fertilizer expenditures	31	7	16	8	12
All variable cash expenses	84	16	46	25	31
Cash receipts less variable cash expenses	120	26	69	35	49
Net cash return	107	24	64	32	45
Farm income	87	19	52	26	36
Family labor income	51	12	33	16	23
Family labor earnings	155	46	108	50	78
SELECTED ALTERNATIVE ORGANIZATIONS					
	acres	*acres*	*acres*	*acres*	*acres*
cres of cropland	17,506	4,470	10,894	5,419	7,868
cres of specified crops					
Cotton	3,786	927	2,265	1,145	1,635
Corn	5,193	1,385	3,355	1,661	2,435
Wheat	1,464	416	957	459	694
Other general crops	4,433	1,105	2,676	1,299	1,923
Non-soil-depleting crops	11,290	2,840	6,914	3,369	4,939
	dollars	*dollars*	*dollars*	*dollars*	*dollars*
otal value of selected items	(000)	(000)	(000)	(000)	(000)
Farm real estate	837	196	486	239	351
All farm property	1,124	265	658	326	476
Livestock receipts	125	27	77	39	52
Woodland receipts	20	8	22	12	16
All cash receipts	274	64	171	87	120
Fertilizer expenditures	42	11	27	13	20
All variable cash expenses	109	25	68	35	48
Cash receipts less variable cash expenses	165	39	103	52	72
Net cash return	151	36	96	48	67
Farm income	128	31	81	41	57
Family labor income	84	21	56	29	38
Family labor earnings	194	55	133	63	94